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Agriculture is the most healthful, the most useful, and the most noble employment of man.—WASHINGTON.

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A. B. ALLEN, Editor.

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TO POSTMASTERS.

MANY of the Postmasters throughout the Union do not seem to know that letters on *Post-office business* go free. It is only necessary to mail the letter unsealed, and write outside upon it "P. O. Business," with the name of the Postmaster, and where mailed. For example, if a paper has a wrong direction, or it be refused, or anything of the kind takes place, by following the above directions, we can be informed of the facts without taxing us with postage. Postmasters ought, in all cases, to make themselves acquainted with their privileges. We trust that those unacquainted with the law will excuse this paragraph, as we have frequently had to pay postage on their letters, when they could have gone free.

DO NOT MIX YOUR POTATOES.

PERHAPS it may not be known to every person who raises potatoes to sell, that, in the New York markets, there is one half difference in the price. This is not always owing to the superiority of one variety over another, but the fancy or preference of the buyer for his favorite kind. Some are partial to the pink eyes—some to the kidneys, while others prefer the carter, the black, Dikeman's seedlings, blue noses, lady's fingers, &c., all of which have their excellences, and when brought to market by themselves, will always be sure to find a ready sale; but when mixed, one with the other, many housekeepers will not buy them at all. We had many orders last spring for particular kinds of seed-potatoes; and, in many instances, had much trouble in selecting the varieties required; and in one or two cases, we were obliged to sort out the kinds wanted, in the hold of a vessel. We cannot too earnestly enjoin upon all growers of this

inestimable vegetable to cultivate each variety on a separate piece of ground, or to sort them at the time of digging, which will be attended with a very little additional expense, but will well compensate them for their trouble.

FRENCH MODES OF DRYING PEARS.

IN France, pears are dried two ways—one, for family use, by putting them into an oven, without being pared, after the bread is withdrawn, either on bricks, or on raised frames of tin or boards. They are put in two, three, and even four times, according to their size, and to the degree of heat contained in the oven. The only things necessary to be observed, are, to see that the oven is not so hot as to burn the pears, and that they are not left in so long as to become hard. Melting sugary pears, of a medium size, are the best for this purpose; and, when properly prepared, they may be kept in bags, in a dry place, for several years. The second mode is that used for preparing the fruit sold in boxes, at the shops; and for this purpose, rather small pears are considered the best. They must be gathered before they are quite ripe, and care taken to preserve their stems. They are then parboiled in a very little water, peeled, and placed on dishes, with the stems upwards. In this state, a kind of syrup runs from them, which must be carefully poured off, and set aside. They are next placed on raised frames, and put into an oven, after the bread has been withdrawn, or heated to a similar degree, and left there twelve hours; after which they are taken out and steeped in syrup, sweetened with sugar, to which there have been added a little cinnamon, mace, and a small quantity of the best brandy. The pears, when taken out of the syrup, are again placed in the oven, which should not be made quite so hot as it was the first time. The operations of

alternately steeping and drying are repeated three times, and are finished by putting the pears, for the fourth time, into the oven, and leaving them there till they are quite dry; when, if they have been properly treated, they will be of a clear, pale-brown, with fine translucent flesh. They are then arranged in boxes, garnished with white paper, and kept in dry places, or offered for sale. They will remain good, in this state, for three years, but are considered best the first year.

NEW YORK FARMERS' CLUB.

At a late meeting of the Farmers' Club of the American Institute, Mr. Meigs read from the *Annals of the Royal Horticultural Society of Paris*, an extract from the Report of a Committee, relative to the progress of their gardener in

Drying Cabbage Leaves, with the view of preserving them, on long voyages, not only as an article of nourishment, but on account of their highly medicinal properties, in the prevention or cure of the scurvy. The leaves were cut into strips about four fingers wide, and placed on hurdles in a stove raised to a temperature of eighty-two degrees to one hundred and five degrees F., where they were kept for four days and as many nights, being turned during the time, only once or twice. They lost in the process of drying about two-thirds of their bulk, and seven-eighths of their weight. When prepared in this way, they harden if put into cold water; but if soaked in warm water in a covered vessel for about one hour, they will resume nearly the same condition as fresh leaves. They are then taken out of the warm water and boiled nearly one hour, when they will be completely cooked. If taken out and seasoned in various ways, there will be no appreciable difference between their odor or taste and those of cabbages freshly gathered. The leaves, when carried to sea, may be packed up in tight boxes, and kept in a dry place for many months.

Mammoth Oats and Gooseberries.—Mr. William J. Townsend presented stalks of Scotch Imperial Oats from his father's farm, at Astoria, which measured six feet, two inches and a half in length. The grain he represented to be good, weighing 43 lbs. to a bushel. Mr. Steele, of Jersey city, presented a branch of the English gooseberry, a foot long, containing 28 perfect berries, some of which measured three and a half inches in circumference.

Protection of Crows and other Insectivorous Birds.—Mr. Turrel presented a report of some humorous remarks lately made by the Hon. Mr. Preston, in the Legislature of New Hampshire, on the subject of the useful habits of the common crow (*Corvus corone*) in destroying insects.

Mr. Skinner stated, that, in Alabama, a planter had a pair of crows, with their wings clipped, which very dexterously cleared his garden of a troublesome vermin called craw-fish (land crabs), in seizing them in the act of entering their burrows, and immediately destroying them.

Mr. Samuel Allen said that he was much pleased with the crow case in New Hampshire, and that these birds, as well as all others, that devour insects, are most important aids to us in the preservation of our crops, and should be protected rather than destroyed.

Insects injurious to Vegetation.—Mr. Van Wyck said that we ought to make ourselves thoroughly acquainted with the habits of insects, in order to carry on our agricultural operations with success; that their numbers are annually increasing, and many new species have appeared hitherto unknown to naturalists; and that accurate descriptions of them should be obtained and published.

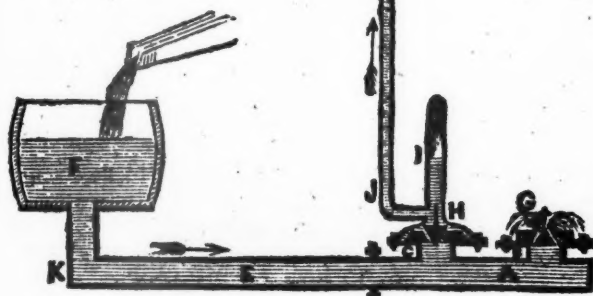
Mr. J. C. Parsons presented specimens of the ordinary squash-bug (*Coreus ordinatus*, of Say), which he collected in Mr. Wakeman's garden. These well-known enemies to the squash-vine, issue from their winter retreats soon after the plant has put forth a few rough leaves, under which they take shelter, pair, and shortly afterwards begin to lay their eggs. During the day time, at this period, by carefully examining the vines, close to the ground, we find these insects, apparently lying there to escape observation; but at night, they crawl on the under sides of the leaves, where they deposit their eggs in little patches, securely fastening them with a species of gum or glue. The eggs, which are round and flattened on two sides, are soon hatched, and the young bugs are somewhat shorter and more rounded in proportion, than the adult insects, and are of a pale-ash color. As they increase in age and size, after casting their skins several times, they assume a more oval form, and their under sides gradually become of a dull ochreous yellow. At first they subsist together in small families, by puncturing the under sides of the leaves upon which they were hatched, and which, in consequence of the quantity of sap imbibed by them, soon begin to wither, and finally become wrinkled, dry, and brown. As the eggs are laid at successive periods, the young broods will consequently be found in various stages of growth throughout the summer. They do not attain their full size, however, and appear perfectly furnished with wings and wing-covers, before the months of September and October, soon after which they desert the vines and conceal themselves in the crevices of walls, the bark of trees, or other places of security, where they pass the winter in a torpid state, and on the return of warm weather, at the putting forth of the squash leaves, they issue from their retreats, pair, lay their eggs, and continue their work of destruction.

The best preventive of the ravages of these insects, is to visit the vines daily at every period of their growth, and kill them before they begin to lay their eggs; but should any escape observation at this time, their eggs may easily be found and destroyed. A solution of green cow-dung and water, or similar preparations from the barn-yard, have been applied to the vines with success. Gas-water, obtained at the gas-works for lighting cities, diluted in six times the quantity of pure water, will also drive them away almost instantaneously. Ants, snails, slugs, &c., will not remain where it has been used. It may be objected that the smell is disagreeable, but this passes off quickly, while the effect in the ground remains, which may be proved by turning up the soil several days afterwards, when the smell will be nearly as strong as at first. Experiments with gas-water, as well as with coal-tar, should be made with precaution.

SELF-ACTING MACHINE FOR RAISING WATER.

OUR attention has been directed to an interesting article republished some time ago in the Farmer's Cabinet; and as it has elicited considerable attention from gentlemen who have a fall of water on their premises, and who would gladly avail themselves of a simple means for raising water to the top of their farm-houses, or to cisterns for supplying their barn-yards, or gardens, we feel that we shall gratify many of our readers by inserting a sketch of an experimental water-ram, made by one of our subscribers in this city, and which we examined with considerable interest. Its construction was so simple, that any of our readers may make one of these machines, and try further experiments at a trifling expense; while those who wish to have more perfect ones, can obtain all the requisite information relative to the outlay, by applying to Mr. J. Elgar, Baltimore, who has given his attention to the subject, and has made some important improvements. It will be necessary for applicants to state the perpendicular height the water falls, and the quantity which flows per minute; also the height and distance to which it is required to be raised—in order that we may be able to obtain the requisite information, and to furnish machines of Mr. Elgar's manufacture.

The experimental machine we examined, was made as the piece A, of cast-iron pipe, 2 inches in the bore, and about 2 feet long, having two flanch nozzles cast on it, B and C. One end of the pipe was closed, and the other open, with a flanch to connect it to about 35 feet of 2-inch cast or wrought iron pipe, E. The other end of the pipe, E, led to an open water cask, F, placed 7 feet above the water-ram, and this



WATER RAM.—FIG. 57.

cask was supplied by a hose, at the rate of 8 gallons of water per minute. Of course the fall from the level of the water in this cask, is equal to a fall of 7 feet, with a stream giving 8 gallons a minute. To the flanch nozzle, B, was attached a brass spindle valve, G, inverting or

opening into the nozzle. When this valve is held down, water can run through the seat of the valve, as shown in the sketch, but the tendency of water flowing rapidly through the pipe, E, and ram, A, would be to press the valve, G, against its seat, and close the opening; the water would then run out through the nozzle, C, but on this nozzle, C, an upward or lifting brass spindle valve, H, was attached, having a piece of 2-inch pipe, I, of about 2 feet in height, covering it. This pipe, I, was closed at the top, but had a lateral branch pipe, J, of one inch bore inserted into it above and near the valve, H. The pipe, J, formed the rising main through which the water to be raised had to ascend. The upper space in the pipe, I, acted as an air-chamber or air-cushion. In large machines, a vacuum valve is inserted in the end of this air-chamber, to supply any deficiency of air, but in this experimental machine it was omitted.

The upright pipe, J, was 80 feet high, measured from the ram, or 73 feet above the level of the water in the supply cask. It was furnished with 3 outlet cocks at various heights. The object of these cocks was merely to ascertain the difference in the volume of water, which would be thrown up by the ram at different heights.

The action of the machine, as detailed in Mr. Latrobe's letter, may appear complicated to most of our readers; but, with the help of the diagram, we think it can be easily understood.

Having filled the water cask, F, the water runs down the pipe, E, and by the time it reaches the valve, B, it has acquired a momentum, which closes the valve, and the only escape is by the valve, C. Through this valve it rushes up into the air-chamber, I, and into the pipe, J. The momentum having been expended, the valve, B, falls, and a quantity of the water rushes out, through the open valve. The water again acquires a fresh momentum, closes the valve, B, and part of it again forces open the valve, C, increasing the column in the pipe, J. The fall and closing of the valves is like a smart blow of a hammer, and they close and open with great precision. In the machine we saw, the strokes were 70 each minute, and plainly heard at the distance of 150 feet. In the course of two or three minutes, the pipe, J, became full, and ran over at the top. On measuring the quantity of water which was thus thrown up in 312 minutes, 73 feet above the level in the water cask, it was found to be 4 gallons; and as during the 12 minutes, 96 gallons of water had passed from the water cask, into the ram, it appears, that it required 23 gallons of water to raise one gallon to 10½ times its own height.

The experiment was continued, and the same quantity of water, 4 gallons, was thrown up 66 feet high, in 11 minutes; 53 feet high in 7 minutes, and 42 feet high in 4 minutes. Thus, in the last trial, the machine required 28 gallons of water to throw up 4 gallons to 6 times the height of the fall. It would have been easy to have made the head of water 10, 20, or 30 feet high, and a series of interesting experiments might be made, to ascertain experimentally the relative differences in the momentum of the water descending from a greater or less distance; the fall of 7 feet, however, was

preferred, in order to give the machine the ability to throw up water to more than ten times the height of the fall, a difference which would not often occur. Whether a fall of 70 feet instead of 7 would have thrown up the same relative quantity of water 420 feet, is a question we confess we are not able to solve.

The pipe, E, it is found, must be 30 or 40 feet long, or the valve, G, will not work; almost all the water ran out of it, when the water cask was put directly over the ram. The valve made 50 strokes in a minute. It is not necessary to have the pipe E a perfectly straight one, but it may be bent to suit the inequalities of the ground, and may even be bent at right angles, as shown in the sketch at K.

FARM AND VILLA OF MR. KING.

HIGH-WOOD, the residence of James Gore King, Esq., is situated on the west bank of the Hudson, about two miles above Hoboken. The estate contains 100 acres, nearly half of which is under tillage. The residue is in ornamental grounds, more wild and beautiful than one can imagine, who has not visited them. The cliffs of dark trap-rock crowned with a great variety of forest shrubs, and trees, laved by the waters of the river, rise perpendicularly 180 feet above the Hudson. The house stands still 20 feet higher, and commands the finest possible views of the city of New York, the bay, and the adjacent country.

Notwithstanding the coldness of the soil, and its thick studding of rocks, High-Wood was originally covered with a great variety of trees. Whatever of these were necessary to give beauty to the place, Mr. King has retained, and with much good taste planted out others indigenous and exotic, thus forming one of the best arboretums we know in the United States. In addition to these, on many of the cleared spots, he is cultivating fruit trees extensively. Among these we found at least fifty choice varieties of pears, and other fruits in proportion; besides several hundred peach trees, all of which seemed to be doing well. He is now trying the experiment of cultivating the Black Hamburg and other European grapes in the open air, by placing the glass frames of his hot beds over them, as soon as they can be dispensed with in the spring, as coverings for the vegetables. The range of green-houses is extensive, and well filled with fruits and plants. Insects have seldom proved injurious to the trees here, in consequence of the birds being strictly guarded from destruction and annoyance of every kind. The crows, even, are so tame that they build their nests and rear their young, near the house. They destroy immense numbers of insects.

Few would have the hardihood to undertake the culture of the table land of High-Wood; but as Mr. King does not spare his means, and is gifted with no small share of perseverance, he has at length succeeded in subduing his stubborn soil, after thorough under-draining, and now makes it produce large crops of grain, roots, and grass. We thought the wheat particularly good. The process of improving his land, and gathering together the means of fertilizing it, are well worthy of record, and when the experiments are complete, we shall endeavor to get the particulars of them for the benefit of our readers.

The buildings at High-Wood are ample and convenient. The house is of stone, and of chaste architecture. Mr. King has one of the best private libraries in our country. It contains nearly 4,000 volumes, and was principally a gift of a relative—the late Gov. Gore, of Massachusetts—to whom it formerly belonged—and whose name Mr. K. bears.

THE ALPACA.—No. 3.

Description, Habits, Food, &c.—The Alpaca, when fully grown, is about 37 inches high to the shoulders, and 59 inches to the top of the head. It possesses many properties in common with the llama—belongs, as we have shown, to the same natural family, to the same country, possessing a similar disposition and manners, and bears much resemblance in figure, but is smaller in stature. Its legs are shorter, with larger muscles, and its wool finer, and more abundant; but it is less robust in its habit, being able to carry a continuous burden of only 50 to 70 pounds.

In a wild state, it is never known to associate with any other animal, but keeps together in herds of 100 or more in number, feeding, through choice, on a sort of rushy grass or reed, called *ycho*, which grows in abundance on its native hills, where, it is said, these animals are never known to drink, so long as a sufficiency of green, succulent herbage, can be obtained. They resort to a particular spot to drop their dung, which greatly resembles that of the goat, the sheep, or of the giraffe, and which often proves fatal to them, from betraying their haunts. When domesticated, they possess the same gregarious habits, and are strongly attached to their birth-place, to which they return at night, evincing little or no inclination to stray away, or to mix with other flocks. They are gentle, docile, and contented in their dispositions, and are as readily restrained as the common sheep, with which, it is said, they perfectly agree. They adapt themselves to almost any soil or situation, as we have already shown, provided the heat is not oppressive, and the air is pure. They will live and thrive on the same sorts of food as eaten by cattle and sheep; but the inferior kinds of browse, grass, or hay, with a due proportion of potatoes, or other succulent roots, are preferred to rich pasture and farinaceous grains. Too liberal an allowance of rich and stimulating food to an animal extremely abstemious, and habituated to live on coarse and light herbage, and that in small quantities, cannot be regarded otherwise than injurious.

FLAX MACHINE.—We can give no additional information to the numerous inquiries addressed us in regard to this machine, other than is to be found on page 331 of our last volume. We understood the owner of it to say, when here last fall, that he would furnish us with a cut and complete description of it; but as he has not yet done so, we must refer our readers to Mr. George W. Billings, of St. Louis, Missouri, who can doubtless inform them all about it. If the inventors of agricultural implements cannot see it for their interest to furnish drawings and descriptions of them for a journal which has many thousand subscribers, and exercises no inconsiderable influence in the community, why then it is their affair, not ours, and we shall not hereafter trouble ourselves about their matters.

DO THE RACES OF FRUIT TREES WEAR OUT?

In the May No. of the American Agriculturist, I find the following statement:—"If fruit trees are properly taken care of, they will never run out, any more than animals or man himself." Either I misunderstand you, or you misunderstand me. You certainly do not mean to be understood that a tree will live for ever if it be properly taken care of. My idea is that a tree has a limit as to age, and that in propagating any particular kind of fruit by ingrafting or inoculating, you do not renew, you merely continue. Am I to understand you as controverting this position? Do you mean to be understood as asserting that any particular kind of fruit, the Newtown pippin, for instance, may be kept in existence for ever? My idea is, that nature has, in the vegetable as well as the animal kingdom, provided one, and only one way for the renewal of life, and that is by the seed. That by ingrafting you merely continue what is already in existence—that the tree which you obtain by ingrafting, is no younger than the tree from which that particular variety was originally obtained. This is the idea I intended to convey, and this I understand you to controvert and pronounce "false doctrine." Your reasons for this conclusion I should be particularly pleased to see.

HENRY W. EDWARDS.

New Haven, June 4th, 1846.

In reply to the above, we would first inquire, Whether it is true that, when a tree or other perennial plant becomes unhealthy from old age, all the offspring previously obtained from it by grafts or cuttings, in all parts of the world, becomes unhealthy too? Or whether such a doctrine is a reasonable inference from known facts? Or is it forced upon us by evidence, although not deducible from mere reason? This appears to have been an important question to a labored advocacy for the last half century, who contend that multiplication by seeds is the only mode of propagation known among plants, and that all other kinds of increase are artificial, and lead to degeneracy. To us, we think it would be difficult to find an hypothesis more at variance with facts, and which cannot otherwise be regarded as entirely destitute of foundation.

The first person who advocated this theory was Mr. T. A. Knight, late President of the London Horticultural Society. In the latter part of the last century, he found that the orchards of Herefordshire no longer contained healthy trees, of certain varieties of apple, which were said to have flourished 50 years before; and, failing in his attempt to restore health to such varieties, by grafting, assumed that old age had overtaken them, and that they were past renovation. Thence he extended the theory to all other plants; and since, various writers, not excepting Sir Humphrey Davy, perhaps out of respect to Mr Knight's great name, rather than from any correct examination of the facts for themselves, have blindly adopted his views.

Through the kindness of Mr. Browne, we have received in advance of publication, the sheets of his new work on the "Trees of America," from which

we make the following extract, premising that this alone would be conclusive, had we no other data upon which to found our argument.

On the subject of grafting the apple, he says: "A theory was advanced many years ago in England, and has lately been revived in that country, and is gaining ground in America, that the '*chance of life in a scion is affected by the chance of life in the original seedling, which began the species*;' that is, when the natural period for the decline of the parent tree has arrived, the scions taken from it will also be found in a declining state, though growing upon stocks in other respects vigorous. The advocates of this theory contend, that each particular variety of apple has its period of vigor and decline, and its duration cannot be protracted by grafting beyond a certain limit; and what they conceive to be very remarkable is, that within that natural limit, the grafts partake both of the vigor and decrepitude of the parent tree or variety. Although the period of duration is not known with any precision, it is thought to be longer in some varieties than in others. It is generally supposed, however, that it never much exceeds two hundred years. It seems that this opinion has chiefly arisen from the fact, that many kinds of the most celebrated European varieties have long since disappeared from their catalogues, and can now no longer be found; while many others, which were much esteemed in their 'palmy days' of bearing, are fast approaching to extinction, and will soon no longer exist. Although the above hypothesis may seem plausible enough in itself, yet, we cannot but remark, that the want of durability of the varieties in question does not apply to every set of scions; for many sorts of apple, as well as several other kinds of fruit, appear to have been readily propagated by means of successive scions, from the times of our forefathers. For instance, the Newtown pippin, the parent stock of which has been dead for forty years, has been successfully cultivated for at least one hundred years from before that period, and is still to be met with in the highest perfection in the markets, both at home and abroad. Furthermore, experience has shown, that many of the scions of deteriorated varieties have flourished for a time after grafting, and afterwards have appeared to die, not from old age, but from disease. Thus Sharrock, who wrote in 1672, inquired 'whether the canker in pippins arose not from incongruous grafting;' and Miller and Knight, of more recent times, each complained that pippins became cankered from a similar cause. Nevertheless, we do not wish to be understood, that the age of a tree is of little moment in the selection of scions; for, when a tree is evidently on the decline, an experienced nurseryman would not cull scions from it by choice, lest they should prove sickly and diseased; neither would he take them from a young tree, before it had arrived at its proper period of bearing. For every cutting taken from the apple, and probably from many other trees, will be affected by the state of the parent stock. If too young to produce fruit, it will grow with vigor, but will not blossom before it has passed through its successive periods of ripening wood; and, if too old, it will immediately bring forth fruit, but will never make a healthy tree. It may further be stated, that stocks often so much influence the scions engrafted

upon them, by habit, if from no other cause, that their fruit is essentially different from that borne on the parent tree; and both stocks and scions, in being transferred to different soils or situations, often improve or deteriorate in the character of their fruit, sometimes becoming more healthful, and at others more sickly and diseased."—p. 307.

On the question at issue, Professor De Candolle, of Switzerland, remarks:—"We may easily conceive that every cultivated variety owed its origin to some special circumstance, which once occurred, and but once. In such a case, the variety has been multiplied by division, and every plant so obtained from it has been a portion of the same individual; which accounts for their all being exactly like each other. An identity of origin in all the plants of the same variety, has led some physiologists to imagine that these varieties or fractions of an individual might die of old age. This was founded upon circumstances observed by Mr. Knight with regard to the Golden Pippin. But it appears to us difficult to admit, upon such a single fact, an hypothesis opposed to all other facts. That varieties will last, so long as man takes care of them, appears to be proved by many of them having been preserved from the most remote periods. But it is also certain that negligence will cause some to disappear, just as accident or industry bring others into existence."—*Phys. Veg.* 731

The same question has been ably discussed and refuted by Dr. Lindley, from whom we cite the following incontestable arguments: "What are called facts," says he, "the real value of which we shall presently discuss, have been adduced to prove that if plants do not die of old age in a wild state, yet that they incontestably do wear out when artificially multiplied by division. In opposition to this it is sufficient to quote the White Beurré pears of France, which French writers assure us have been thus propagated from time immemorial, and which exhibit no trace of debility; or the cultivated vines of which the very varieties known to the Romans have been transmitted by perpetual division, but without deterioration or decrepitude, to our own day. The *Vitis præcox* of Columella is admitted by Dr. Henderson, on the authority of the most trustworthy writers, to have been the *Maurillon*, or *Early Black July Grape* of the present day; the *nomentana* to have been the German *traminer*; the *gracula* the modern Corinth or Currant; and the *dactyli* our *Cornichons* or *Finger Grapes*.

"But it is affirmed that some cultivated plants have really worn out. The Redstreak, the Golden Pippin, and the Golden Harvey apples, are among the number quoted. The first of these is little known to us, and we have no evidence about it; but the Golden Pippin and Golden Harvey are certainly not capable of being employed in support of Mr. Knight's theory. Both are to be found in various places at this moment, in as perfect health as they ever enjoyed. The Golden Pippin is among the most vigorous apples of Madeira; the Golden Harvey is in all good gardens. Of the former, healthy trees were many years since shown to exist in Norfolk; in warm dry places it has no particular appearance of suffering. Recruited by the fine climate of France, the Golden Pippin has been received back to this country in as healthy a

state as ever, and is now growing in the garden of the Horticultural Society. The old Nonpareil was well known in the time of Queen Elizabeth; in cold places it cankers, and no doubt always has cankered; but what can be more healthy than that variety in favorable places? In short, what is called evidence breaks down wherever it is examined; and the argument about the wearing out of races proves to be baseless."

"Wild perennial plants, whether woody or herbaceous, whether forming a trunk or a mere permanent root, have never yet been shown by any trustworthy evidence to be subject to decrepitude, arising from old age. On the contrary, every new annual growth is an absolute renewal of their vitality, in the absence of disturbing causes. Hence the enormous age at which trees arrive. A thousand years is still youth to a forest tree which no accident has injured; and there is no intelligible reason why it should not, if guarded from violence, continue to grow to eternity. It is very true that plants do in reality perish commonly without attaining any such longevity; and that constitutional feebleness is notoriously one of the accompaniments of advancing age. But this arises from external, not intrinsic causes. The soil which surrounds them is exhausted, their roots wander into uncongenial land, water in unnatural excess is introduced, the food they require is withheld, violence rends them, men mutilate them, severe cold disorganizes them, and these and other causes produce *disease*, which may end in death. But this is very different from dying of mere old age; and for practical purposes it is most material to draw the distinction."

"Although an examination of evidence leads us to the inevitable conclusion, that the wearing out of the races of plants by old age is a delusion, yet we are far from denying the accuracy of the statements made by some recent writers on this subject. We may admit their facts, but reject their reasoning, and protest against the inferences they would have us draw."—*Gard. Chron.* 1845 p. 833.

CULTURE OF THE GRAPE AND MANUFACTURE OF WINE.

OUR readers will find several articles on these subjects in the two first volumes of the *Agriculturist*. We were sanguine in their success, if properly undertaken, particularly in latitudes south of 40°, and cited several examples, giving the method of culture, and making wine, on a tolerably extensive scale. Since this, the culture of the grape has greatly increased, especially on the banks of the Ohio. N. Longworth, Esq., of Cincinnati, has recently sent us a pamphlet on the above subjects, and as he is a gentleman of considerable experience, and the owner of extensive vineyards, we avail ourselves of the following valuable extracts from it.

"I have seen a late article from Mr. Resor, on the cultivation of the grape and manufacture of wine, in which he praises the Isabella grape, as being valuable for cultivation as a wine-grape, and remarkable for ripening its fruit. If my experience is to be relied on, his article is calculated to do great injury to those now planting vineyards. In all my early vineyards, I cultivated the Isabella ex-

tensively. I cultivated it on the tops and sides of hills, with all exposures, and on bottoms. I have cultivated it for twenty-five years, and still have a few of them in three of my vineyards, and a few in my garden. It is the worst grape for ripening we have. Usually half the berries continue green, and they are also liable to rot. My German vine-dressers have extirpated it from their vineyards, or are now doing it. It is best manufactured into a sweet wine, by adding one and a half, or two pounds of white Havana sugar to the gallon. I incline to the opinion, that Mr. Resor has mistaken the Cape grape (Schuylkill Muscadell), for the Isabella. The Cape is generally free from rot, and bears and ripens well, and makes a better wine than the Isabella. The Isabella succeeds better at the East, than it does with us.

"The day is not distant, when the Ohio River will rival the Rhine, in the quantity and quality of its wine. I give the Catawba the preference over all other grapes, for a general crop, for wine. Sugar was formerly added. The Germans have taught us better. Where the fruit is well ripened, sugar will injure it, where intended for long keeping; where the grapes do not ripen well, I should still add from 6 to 10 oz. of sugar to the gallon of must. It rivals the best Hock, and makes a superior Champagne. The Missouri grape makes a fine wine, resembling Madeira; but is less productive than the Catawba. I have heretofore considered this a French Pineau grape, as it is a delicate grower with us; but I sent some of the plants to my sister in New Jersey, where the soil is poor, stony, and stiff. It there grows as luxuriantly as the wild grape of the woods, and is perfectly hardy; and I now deem it a native. I obtained it of Messrs. Prince, of Long Island, twenty-five years since. The berry is small, the bunches of medium size, berries free from a hard pulp, and very sweet. The Herbemont is a fine table grape, and makes a fine wine; but is subject to rot. The Lenoir much resembles it, if not identical, which some consider it; I do not. The Ohio is a fine table grape, bunches much larger than either of the former; but experience does not enable me to recommend it highly for wine. It has a peculiar flavor, and resembles a foreign variety I have heard highly lauded, but does not suit my taste. The Bland is a bad bearer; does not ripen well, nor make a good wine, but is a fine table grape. I do not believe it a native grape. Gen. Harrison informed me, that it was introduced into Virginia sixty years since, by a French gentleman of the name of Mazzei. The Elsanborough is a good table grape, and free from a hard pulp. Norton's seedling is far inferior as a table grape, to the Herbemont, Ohio, Lenoir, Elsanborough, and Missouri, which it resembles in the size of its fruit. It has a pulp. I am trying it this season on a small scale, for wine. The grapes were very ripe, and the wine has much body, and is of a dark claret color, though pressed as soon as gathered. I do not admire the flavor of the wine. Writers tell us to the contrary, but grapes may be too ripe to make good wine; and I incline to the opinion that this was the case with my Norton's seedling. The grapes were pressed as soon as gathered, yet the wine was nearly black; a certain proof that a fer-

mentation had taken place in the fruit, before gathered. It was increasing the saccharine principle, at the expense of the aroma and flavor.

"In the hope of inciting other Germans to go and do likewise, I will state the result at one of my vineyards this season. Sixteen years since, I bought an unusually broken piece of ground on Boldface Creek, four miles from the city. The soil is rich, but abounds in stone. I had a tenant on it four years, who was bound to plant a vineyard. At the end of four years nothing was done. I tried a second, and after three years, found no grapes. I then gave a contract to a German (Mr. Tuerber), who had a wife, daughter, and three stout boys. I gave him a hard bargain. I required him to trench and wall with stone, six acres for grapes, in three years, and nine acres in five years. He was also to plant out a peach orchard, and tend an apple orchard, I had on the place. The wine and proceeds of the orchards were to be equally divided. I carefully avoided climbing the stony hill for three years, expecting the same result as formerly. When I visited the hill, at the end of three years, I found the six acres handsomely trenched and walled, and set with grapes. There are now nine acres in grapes. The tenant complained this year of the rot in his vineyard. I am in the habit of selling to the tenants, my share of the vintage, at a price that enables them to sell at a profit. I this season sold at 75 cts. per gallon, at the press, for the Catawba, 62½ cts. for the Cape, and 50 cts. for the small quantity of Isabella made. He has paid me \$661 for my share of the wine, and for his share and the profit on my part, has realized the sum of \$1,392.50. The Catawba he sold at \$1.25 per gallon.

"The best crop for the extent of ground this season, was at the vineyard of Mr. Rents, about four miles from town. Two acres yielded 1,300 gallons. This is as large a yield as I have known, taking two acres together. To select particular spots, I have raised at the rate of 1,470 gallons to the acre. The grapes at the vineyard of Mr. Rents would have ripened better, had one-third of the bunches been cut off early in the season. Where the crop is very abundant, it requires a very favorable season to ripen the fruit well.

"Six hundred and fifty gallons to the acre is a large yield, and the season must be favorable, or they will not ripen well. A large crop is often occasioned by leaving too much bearing wood. This should always be avoided; for even if the crop ripens thoroughly, too much of the sap is taken by the fruit, and too little left to produce good young wood for the next season's crop.

"I have for thirty years experimented on the foreign grape, both for the table and for wine. In the acclimation of plants I do not believe; for the White Sweet Water does not succeed so well with me, as it did thirty years since. I obtained a large variety of French grape from Mr. Loubat, many years since. They were from the vicinity of Paris and Bordeaux. From Madeira, I obtained six thousand vines of their best wine grapes. Not one was found worthy of cultivation in this latitude, and were rooted from the vineyards. As a last experiment, I imported seven thousand vines from the mountains of Jura, in the vicinity of Salins, in France. At that point the vine region suddenly

ends, and many vines are there cultivated on the north side of the mountain, where the ground is covered with snow the whole winter, from three to four feet deep. Nearly all lived, and embraced about twenty varieties of the most celebrated wine grapes of France. But, after a trial of five years, all have been thrown away. I also imported samples of wine made from all the grapes. One variety alone, the celebrated Arbois wine, which partakes slightly of the champagne character, would compete with our Catawba.

"If we intend cultivating the grape for wine, we must rely on our native grapes, and new varieties raised from their seed. If I could get my lease of life renewed for twenty or thirty years, I would devote my attention to the subject, and I would cross our best native varieties with the best table and wine grapes of Europe. We live in a great age. Discoveries are daily made that confound us, and we know not where we shall stop. We are told of experiments in mesmerism, as wonderful as the grinding over system would be; but I fear the discovery will not be brought to perfection in time to answer my purpose, and I must leave the subject with the young generation."

DAIRY COWS.

WE have so often endeavored to inculcate upon all farmers who raise cows, the necessity of paying greater attention to their qualities as milkers, that we are almost ashamed to mention the subject again. But meeting with an article which recently appeared in the Barre Patriot, Massachusetts, we will condense the substance of it for our readers.

Mr. Harrison Baker has a dairy of thirty-four cows, twenty-four of which are grade Durhams, and ten are Natives. The editor of the Patriot says, twenty-seven of the thirty-four carried such enormous and distended udders as he never before had the pleasure of witnessing. He saw the cows milked. Twenty-three of them gave each over a twelve quart pail full, and several of them more. He regrets he did not weigh their milk, but adds: "We, however, weighed the milk of one young cow 5 years old, and of two heifers 4 years old. The weight was as follows: the cow gave 25½ lbs., equal to 51 lbs. a day; one heifer gave 21½ lbs., equal to 43½ lbs. a day; and the other gave 21½ lbs., equal to 42½ lbs. a day. The cows, as to size, are most of them about middling, weighing from 750 to 1000 lbs., as we should judge. Seven of the 34 cows are quite ordinary milkers, leaving 27 cows, such as we venture to say are not to be found in one lot in New England, if indeed they are to be found anywhere. Mr. Bacon informs us that he commenced making cheese about the 1st of April, which is the usual time of commencing, since which, he has made from the thirty-four cows between 7 and 8,000 lbs. of cheese, and thinks that he shall make from 12 to 13,000 lbs. more before the 1st of December next—making in the whole, from the 1st of April to the 1st of December, about 20,000 lbs. The day before we were there, he made 134 lbs. of cheese from one day's milk, and thinks by another week he shall come up to 140 lbs. a day. We hardly think this, with the same number of cows, has ever been equalled by any

farmer in this or any other country. Mr. Bacon gives a decided preference to the grade Durhams over the Natives, and is now rearing 6 yearlings and 11 calves, which are half blooded Durham, and in which we think the most skilful connoisseur of stock would hardly be able to detect a fault. The reason of the preference given by Mr. Bacon to the Durhams over the Natives is, that they generally yield more milk of an equal good quality, though the difference in this respect is of less consideration than the fact that the Durhams yield milk about a month longer than the Natives. He says he finds it difficult to 'dry up' many of his Durhams at all. Twenty-two of Mr. Bacon's cows were raised by Mr. Elias Ayres, who has recently taken up his abode in Virginia, and whose experience and skill in breeding animals for the dairy were well known to most of our farmers, though we have reason to think they were not sufficiently appreciated by them."

RAISING GRAIN AT THE SOUTH.—Mr. Alexander McDonald of Alabama informs us that he sowed, in September last, several kinds of wheat that he obtained from the Patent Office; one variety of which entirely escaped the rust, and produced the finest grain that he has ever seen. He also has raised from seed obtained from the same source, half a bushel of multicolored rye, and a small quantity of Polish oats, which will soon enable him to furnish a supply of these invaluable grains to others in his section of the country for seed. He says, "I took hold of my business on the 12th day of May, since which time, I have spent some twelve hours each day, in personal attention to the plowing and hoeing of my growing crop. This is what I have not done for the last fifteen years; but such is the deep and abiding interest I feel in the success of my agricultural operations, that I cannot feel satisfied without being present."

TO THE FRIENDS OF AGRICULTURE.—We are necessarily so confined to our business at present, as to prevent our making as many excursions as we otherwise would do, among the farmers. We hope, therefore, that all interested in the advancement of agriculture, will be the more ready to furnish us matter for publication. There is scarcely a farmer, planter, or gardener, in the Union, however few his acres under cultivation may be, who does not annually find out something new in regard to the products of agriculture, and their management. Let these facts be noted, and in due time communicated to us for publication. In this way our Journal may be made a store-house of useful information, and our contributors will have the satisfaction of knowing that they are not only doing things for the benefit of those who are engaged in the same calling, but for the world at large.

GLASS MILK PANS.—By recent accounts from abroad, we observe that glass milk pans are being introduced into England, which it is thought will preserve milk much longer, and will prove economical. They may be made of green glass, of any convenient size or shape, with, or without covers; and, with careful usage, will last a thousand years.

DISEASE OF FOWLS.

I do not doubt that Mr. H. T. Lloyd (see current volume, page 142) has succeeded in curing his hen, but not by his surgical operation. I have lost in winter time many fowls by this same distemper. I tried such surgery—rhubarb pills, assafœtida, and other nostrums, till circumstances made me reflect better, and finally discover the true cause of the disease. Hens are by nature provided with a crop to serve them as a magazine for provisions; because, in their natural state, they stumble sometimes upon an abundance of food, and often for days find nothing. But as any kind of vegetable or animal matter kept in a moist and moderately warm state, must inevitably begin to ferment and putrefy, all-provident nature has given to these bipeds the instinct to find a remedy against the detrimental effect of putrefaction upon a living organism, the remedy for which is lime.

Fowls, if fed ever so well, will become sick, and finally die, if they cannot get at gravel and lime, the one acting mechanically, and the other chemically, in the digestion of their food. It is an error to believe that they only eat lime for the formation of the shell of the egg, because cocks eat as much lime as hens, and young chickens do so likewise. In opening and examining hens which have died of this disease, their stomachs will show an essential difference from that of a sound fowl. In the sound one, the innermost coat of the stomach is a strong leather-like whitish or yellowish substance, and can be pulled off from the outermost part in one piece, without breaking. In the diseased hen, this coat will be found either completely, or at least partially black, round the œsophagus, the orifice by which the food enters—in a state of inflammation or even putrefaction, crumbling to pieces, at any attempt to pull it off. This skin or coat contains, gives out, and forms the gastric juice, without which no digestion can take place. The chemical theory of fermentation, which I cannot enter into here, is too well ascertained, and explains the action and reaction of putrid food upon the gastric juice, if not remedied by an alkali. Any market-dealer of fowls will affirm that this disease befalls them when they are cooped up for some time, and ship-masters know it too well to their great damage; yet they are all either too ignorant or negligent to provide them with gravel and lime. Sometimes, when the fowls can get both these remedies, before the disease is gone too far, they recover; but if they emit from their mouths a strong fœtid smell, nothing can save them.

About three weeks ago, a friend of mine bought 100 fowls in market. He observed some 40 or more sick of this disease, and dying off with full crops. He applied to me for advice, and I made him separate all the sick ones from the others, and keep them for 36 hours without food, provided only with water. We then examined them, and found about a dozen with full crops, yet smelling very bad from their mouths, which were marked, and put with those whose crops were empty, or nearly so, and kept upon a diet of soaked wheat, into which was mixed charcoal powder and air-slacked lime, for about 10 or 12 days. The first ones are now all dead, and the others almost all re-

covered, and begin to lay. Mr. Lloyd's hen was no doubt in the first stage of the disease, and his feeding her on warm food, perhaps scalded meal, which she wanted, but not gravel nor lime, being easily and rapidly digested, made her recover; and such a diet would perhaps have done so without surgery. I opened the crops of many hens without having ever saved one by it; and I believe it to be an error that the passage into the stomach can be obstructed, into which error I first fell likewise, although it might occur, but certainly not in a whole coop-full at once, and I yet doubt that any fowl would swallow anything liable to do so; they are too cautious for that. S.

SHEEP HUSBANDRY.

In looking over the January No. of the American Agriculturist, I noticed a communication of a gentleman from New York, who had examined some of the Spanish and French Merino sheep. He speaks very unfavorably of any importations from Spain to improve our Spanish sheep that have been reduced by bad crossing. He states that in consequence of bad management, and carelessness in breeding, the flocks in Spain have become so reduced that they have imported bucks from Saxony to improve them; the consequence of which is, they have reduced the size, lessened the quantity of wool, and enfeebled the constitution. It appears that they have got into the same trouble in Spain that we have here, and in the same way. The question now arises, How are we to extricate ourselves from this trouble? If we can get no pure bloods that are more perfect from Spain, than we have here, then there is but one course for us to pursue, which is to see if we have any sheep that represent the pure Spanish blood, when first imported into this country, and then see whether the owners of them can establish the purity of that blood by certificates from the importers themselves, and from others well acquainted with their course of management in breeding, down to the present time. There are some such flocks of sheep in this country, and I esteem it a pleasure as well as a duty, to state where they may be found, and also to add a few remarks partly in repetition of what I have formerly said of my views and experience in the art of sheep-breeding.

In selecting male animals for breeding, we should take great pains to procure pure bloods, and those that are most perfect in their outward appearance. In breeding, at least three out of four will partake largely in their outward coat and appearance of the male. In breeding fine-woolled sheep, this is a very important item, as the outward coat constitutes nine-tenths of their whole value. It agrees with my observation, that all crosses of pure Spanish Merino bucks upon any other kinds of sheep, prove a great improvement; and on the other hand, all crosses of other kinds upon the Spanish ewes, either injure the quality of the wool, lessen their size, or enfeeble the constitution. I suppose that all fine-woolled sheep were taken originally from Spain, which was their native country. It is claimed by some of the owners of Saxon sheep, that there should be no crossing; that the several breeds should be kept distinct. I

think this to be an error. The great trouble at present with the Saxon sheep is the want of a cross. In the year 1764 it appears that the Elector of Saxony obtained permission of the King of Spain to import a number of Escorial sheep, taken from the king's own flock. In the year 1777 there was another importation from Spain to Saxony, of Escurials, Montarcos, and Negrettas. Now, if either of these kinds of sheep have been kept without a cross, they have been bred in-and-in more than sixty years. If the holders of Saxon sheep would procure bucks of the Escorial or Montarco kind of pure bloods, in my opinion they would bring back their flocks to a state of purity. I have been accused by some of the Saxon wool-growers of having Saxon blood in my flock, probably for reasons well understood by themselves. I claim not to have any. I have lately received certificates from three of the gentlemen who imported the breed of sheep which I have now in my possession in their pure state, which I am prepared to substantiate by certificates from men of respectability, who have been acquainted with my course of management down to the present time.

Captain Gad Peck certifies that the sheep which I purchased of him he imported from Spain from the Don Delapontes flocks, said to be the best blood in Spain, and so pronounced by General Humphrey on their arrival here, and their blood has never been doubted by any one. They were of the Montarco and Negretta kinds. Doctor Samuel Elton certifies that he was one of the importers of the cargo of sheep in 1811, and that the buck which I referred to, in giving a pedigree of my sheep, was a full blood Escorial. Of what blood the General Humphrey sheep were that this buck was crossed upon cannot be ascertained; but they were supposed to be the Escorial. It appears that the sheep from which my flock has sprung, were taken from Spain, of the same blood as those imported to Saxony. Now, why is it that they are so different? It must be in consequence of the different course of breeding. I have taken great pains to cross the different kinds as often as once in two or three years—never using a buck to his own offspring. When I breed from a buck that represents the Montarco, three-fourths of the lambs will be of that kind, but I make no improvement from that kind of bucks. I then change and take a buck that represents the Escorial—most of them improve for two or three years. It may be asked by some, Why I do not improve from the Escorial all the time, if the improvement comes wholly from them? I answer, it is the cross which makes the improvement. It will not answer to breed in-and-in if we would preserve the flock from degenerating. I have always bred from the best buck that I could raise or find; but since I purchased the one in the year 1828, I never have been able to find one out of my own flock that suited me for a cross. I never have allowed any one, in purchasing, to select one of my best ewes, until somewhat advanced in years. Since I have had the Escorial blood in the flock, I never have known any one that has used bucks of that blood, but what has made great improvement. I will refer to some of the gentlemen that have improved from my flock. Mr. Samuel H. Nettleton commenced with the Escorial blood about the same

time that I did; they are now in the care of his son. They have bred from my flock for the last five years, and I believe they have pure Merino sheep. Mr. Stephen Atwood, of Woodbury, purchased a buck of me in 1832, which he used a number of years, and has received great credit for his improvement. Messrs. Nathaniel B. Smith, of Woodbury, Lauren Thrall, of Torrington, Edward Hickox, George F. Merriman, and Dayton Mattoon, of Wattertown, have all of them used my bucks, and have made great improvements, and have very fine sheep. If improvement be made in this country, it must be from pure Spanish blood.

It is not my intention, by this communication, to puff up my own sheep, or any others, above their merits. I have no bucks that shear 11, 12, or 14 lb. fleeces—neither do I believe any one has, who has pure Merino sheep. After the introduction of Saxon sheep into this country, it seemed to be the great end of wool-growers, to see how fine a sample of wool they could raise without regard to constitution or quantity of wool. After a while, many saw their errors. The next move was to see how great a fleece they could get without regard to fineness or softness of the wool, and I believe have bred their sheep impure to accomplish that object, and have sold these fleeces under the name of Merino wool, which has been the cause of many of our manufacturers forming strong prejudices against all Merino sheep, while most of them are strangers to the pure article. I contend that pure Spanish Merino wool is as perfect as any other that has been grown in this country. As I have shown the two opposite extremes which wool-growers have run into, let others shun their errors, and see how many of the most valuable qualities they can combine in one animal, or in one flock of sheep. I consider it of the first importance to New England wool-growers to improve our flocks so as to be able to produce the best sheep raised in any country, combining all these good qualities, good constitution, heavy fleeces, finest wool, and perfect style.

The gentleman alluded to in the first part of this communication, speaks very favorably of the French Merinos. He mentions a buck raised by Mr. Gilbert, from the Rambouillet flock, whose weight was 230 lbs. The question arises in my mind whether that buck would cross well upon our fine sheep in this country, which are so much smaller. The lambs would, of course, be much larger, giving the ewes great trouble in bringing forth, and would need a large supply of nourishment. The consequence would be, a long-legged, imperfect-shaped animal. If a gentleman who has the ability would import some of the Rambouillet ewes and cross a pure Spanish Merino buck upon them, the consequence would be just the reverse. The ewes would have no trouble in bringing forth—have a great supply of nourishment, and the lambs would be lower on the leg, and be most perfectly-shaped animals; but after all, is it not our duty, in case there is as perfect stock bred in this country, and of as pure a race as is to be found in any other, to retain the credit at home, in preference to giving it to another nation? I am satisfied that there is as great improvement made in this country in breeding fine stock as in any other—that there have been as perfect sheep raised in this country as

was ever imported here from Spain. If this be correct, are not the improvers entitled to some credit? I saw a communication in the April No. of your paper, signed Thomas Affleck, of Mississippi, containing some observations on the different flocks of sheep which he examined during a trip to the north. He seems to be impartial in his remarks, and is disposed to give credit where credit is due. I noticed also another communication signed John Brown, of Ohio, which seems to be written in a very different spirit. This gentleman speaks very disparagingly of those that have given a description of their own stock in agricultural papers, in answer to inquiries. I think it is a proper course. The public have a just right to demand a pedigree of their stock, and also certificates to prove what they have stated, and it is their duty to give them. The gentleman says he has lately given to the editor of the Albany Cultivator the names of several wool-growers, who have not puffed up their sheep in agricultural papers, as entitled to more credit. That is perfectly well understood. Perhaps they do not puff their own up, unless through their agent, but they are very active in puffing their neighbors down. It is one thing for a man to raise his credit by travelling through the country, and collecting a flock of sheep by selecting here and there one from the finest flocks; it is another for a man to be at home attentive to his business, and breeding a flock of fine sheep. It is yet another and still a more difficult thing to improve a fine flock of sheep by the art of good breeding. The former does nothing but transfer one man's improvement to another; while the latter not only adds to his own private interest, but is able to furnish male and female animals for the improvement of others, and thereby adds to the interest of the world.

JACOB N. BLAKESLEE.

Watertown, Ct., June 2, 1846.

EFFECTS OF SLANDER.—The calumniator injures three persons at a time—the person calumniated, the one who listens, and most of all himself — *Spanish Proverb.*

BLIGHT IN GRAIN NOT PRODUCED BY THE BERBERRY BUSH.—The *Berberis vulgaris* is subject to a disease called mildew (*Æcidium berberidis*) which, when magnified, is found to consist of a number of small orange-cups, with a fine film over each. When ripe, these films burst, and the tops of the cups assume a ragged, uneven appearance, in which state they look like white fungi. The cups are filled with innumerable little cases, containing seeds or sporules, and these constitute the bright-orange powder that is seen on the leaves and flowers of the berberry, and was long supposed to be the blight on corn both in Europe and America. This opinion, though totally unfounded, is of unknown antiquity. The error has been ably and scientifically refuted by Messrs. Du Hamel, Broussonet, and Drs. Grenville and Lindley. The blight on corn is generally a species of uredo, and does not correspond in botanical characters with the æcidium. One of the principal reasons why corn will not thrive in the immediate vicinity of the berberry is, on account of the meagreness of the

soil in which it often grows, it being impoverished by its creeping roots.—*Browne's Trees of America.*

A REVIEW OF THE APRIL NO. OF THE AGRICULTURIST.

I CONTINUE my comments upon your publication; but in future I intend to be less prolix. My object in part in my Review of the March No. was, to show your readers what a vast amount of useful matter is contained in each No. . . . I shall now only notice such articles as I think can be reviewed with advantage to them; as cavilling is not my object. As you have given me permission to criticise your articles, I shall begin with that upon the

Value of the Grasses.—In my former article I complained of the want of definiteness in writers upon scientific subjects—this will apply to this article. Perhaps it is the fault of the language, that we have no definite term to express our meaning when speaking of "the grasses;" a term that means a family of some 300 members. Perhaps some of your readers are not aware that maize (Indian corn), sugar cane, rice, and grain, are part and parcel of "the grasses," as much as timothy and clover. When speaking of the latter and their immediate kindred, then, it would be better to adopt some definite term. Suppose we say "stock grass," or "hay or pasture grass," to be more definite in our meaning. I agree with you as to the value of the crop of hay and pasture grass, in some parts of the Union, but in others there are thousands of persons who are called farmers, who live, year after year, without cultivating a single acre of such grass. Therefore, anything that you can say to induce an extension of culture of such a valuable crop, will be well said.

Agricultural Colleges and Schools are in advance of the age—you might as well appropriate that space for other matters. It is idle to attempt to procure legislative action upon so important and beneficial an object, until we are farther advanced in the scale of civilisation. Witness our national councils, and the Smithsonian bequest.

Coal Ashes for Grass Lands.—Valuable without doubt. But instead of rolling in the cinders, which cannot be done so as to keep them entirely out of the way of the scythe, let them be put into a cart or wagon bed made on purpose to sift ashes, and geared to the wheels, so as to give a shaking motion, and then burn the cinders.

Sowing Corn for Fodder.—Among your recommendations, why not tell those tens of thousands of Southerners who never save any other kind of "roughness," how much better than "corn blades" would be a crop of broadcast sown corn, and how much easier to provide a supply of fodder where they won't try to raise hay grass, than their present system of stripping the leaves from the growing corn-stalks? If the ground is plowed, and weeds well turned under about the 1st of July, there will be a good crop, without the necessity of drilling or after culture.

Fish for Manure.—Try spent bark from the tannery. It will absorb the ammonia.

Descriptive Catalogue.—This is the best advertisement that I have ever seen, as the extract expla-

natory of the three plows will in part show, and the hundred other cuts and explanations, together with a mass of other information, makes not only a useful, but a very interesting, readable book.

Mustard as a Field Crop.—If it will yield "ten or fifteen bushels to the acre," and bring the half of the price you say, it is a more profitable crop than wheat. Give us more upon the subject. The western bottom-lands and rich prairies can carry the crop without danger of exhausting the soil.

American Agricultural Association.—I have but little to say of this excellent association. But I will report for Mr. Clark upon "the expediency of establishing a silk manufactory," against the measure. I have great faith in the growing of silk in all this country, but it must be done as a domestic business. Every family in the county or villages could keep a few worms, and the product would be all profit. Silk cocoons should be produced just as honey is now, or rather as it should be, in every family.

A Leaf from a Farmer's Ledger.—I like to see this kind of accounts, but I pray that some of your readers be not misled in the "root crops." I have asked, "will it answer when oats and corn are not worth more than ten or twelve cents a bushel," and hay from \$1 to \$2 per ton, to cultivate roots for economical feeding? Such we are told is the fact out West. Then, too, \$100 will pay for 25 or 30 acres of land under good tillage. "Circumstances alter cases."

The Row Culture of Wheat.—This, and hoeing out the weeds, will do very well for "a patch," but for a western prairie field of 300 to 800 acres, where land is very cheap as well as team labor, and where manual labor is very dear, will it answer a good purpose? As for a drilling machine for wheat, when one is wanted, I would recommend Pennock's of Westchester (or in that vicinity), Penn. I am greatly in favor of drilling all hoed crops, and perhaps it would be profitable to drill all grain.

Rambouillet Merinos.—Too much controversy upon this subject to be profitable to your readers. If Mr. Bingham's flock do average 5 lbs. per head of real Merino wool, then it is a good flock. If Mr. Randall's average more, and better wool, then his flock is better; to prove which, send the whole to Mr. Lawrence, of Lowell, and publish his certificate as to the relative value of their fleeces, and let us have no more of this uninteresting dispute of which is best.

Scripture's Carriage Wheel.—Unless I am greatly mistaken, this is one of the most valuable improvements of this age of inventions: Capt. De Bonville, about ten years ago, undertook to cross the Rocky Mountains with about sixty wagons, before the road through the South pass was known, and his wagons literally tumbled to pieces, in consequence of the dryness of the atmosphere at the great elevation that he reached; and the same difficulty in a lesser degree occurs to every Oregon emigrant. How invaluable would be a set of these wheels, if they prove to work well! I pray you, Mr. Editor, to personally examine some that have been longest in use, and tell us what the owners say of them. What is the amount of extra expense?

Necessity of a Knowledge of Chemical Principles to a Farmer.—Convince him of this fact, my worthy friend, and then will the country be ready for agricultural schools. This is one of the best writers that appear in your paper, and this is a most capital article, the title of which will be looked at and passed over by many a one it was intended to benefit, as something to them uninteresting; as you may often hear a farmer say, that he don't want to know anything about chemistry. And yet here, in this single article, upon the subject of white to preserve his buildings, he might learn enough of chemistry to be worth fifty times the price of the *Agriculturist*, every year. For the reasons stated, is not white an excellent color for horses and cattle? Let us hear further from R. L. A., upon this interesting subject.

Sheep at the South.—I have no more doubt than Mr. Affleck, that fine wool can be grown in Mississippi; but that wool will ever be produced there in great abundance and profitably, I have some very strong doubts. Mr. A. says he commenced handling our flocks at Utica. At the same place I commenced getting acquainted with this southern planter, who, for aught I know, may be a very good one. But will he prove a good shepherd? I hope he will not lie in bed and leave his sheep to the care of his careless negroes. This is the reason why flocks do not prosper better at the South. Mr. A. is out of humor with us because we charge too high for sheep. When they are unprofitable, we will charge less.

Agriculture and Lands of Florida.—This is an interesting article, from an interesting writer. None of your articles are read with more general interest, than descriptions of those portions of our new lands that are but little known in the "old settlements." It is not a matter of surprise to me, nor need it be to friend Parsons, that no one has attempted to cultivate and prepare the dried fruits. Mr. Affleck gives the reason in the No. under review. Here it is:—"The cotton crop affords no time for attending to others. From New Year's day till Christmas, it keeps every hand incessantly employed." And still they gain nothing ahead. Debts and cotton. Cotton, and debts, and slavery. And with all, the only freeman is the slave. The master is so great a slave that he has no time to cultivate fruit. I can demonstrate, in ten lines, that cotton is a curse to the South. "One of the most profitable employments, &c., in Florida, is the raising of cattle." And pray where is it not? If it is profitable in Florida, I venture the assertion that it is equally, or more so, in Wisconsin; for there the beef is worth twice or thrice as much, and can be packed 6 or 8 months of the year, sweet, sound, fat, and good, from the wild prairie grass, by means of one of the new kind of "salting machines." In the North, cattle have a value. In the South, particularly Central America, their value is at most but small. Commend me to the North for cattle-raising for profit.

Sheep Husbandry, by John Brown.—Now, whether Mr. Brown had lately got himself a pair of cowhide boots with thick soles, well nailed, or not, I am sure I cannot tell; but he does hurt some of our Down East toes most confoundedly; and he

don't seem to care much whose they are. And as I don't mean to let him know who owns mine that he is trampling upon, I shall advise him to keep on trampling; and I will risk my toes just for the fun of seeing some of my neighbors kick and scold. There is too much humbug peddling among stock raisers, and an editor of an agricultural paper that will accept of pay for puffing off a spurious breed of "*sperm oil Merinos*," is no cultivator of moral honesty. It is time some swindling tricks that I know of, were exposed. I caution buyers at the South and West not to send orders here, unless they do it through some agent who has a reputation that cannot be greased over with so contemptible a covering as *artificial gum* on a sheep's wool. I hope, that after all, Mr. Brown is not advertising his own flock. Pray let us hear from him again.

Importing Beet Seeds is an absolute disgrace to this country. But I cannot think it would be, if it was known that it would meet with a ready sale at a fair price, if raised at home. Please tell us what is the price, and where the market? [We usually sell at 75 cents per lb. See our Catalogue, p. 60.] The crop must be a large one in bushels, per acre; but only about one-half should ever be put up for seed by an honest man, except a sort of a whale-oil Merino-buck honesty. What would the small refuse seed be good for? [Nothing at all that we know of, except for manure.]

A Massachusetts Barn.—Just what we might expect from a State where they put timber into a machine that turns out finished plows. I like this barn, and if Mr. Knox can make them for \$600 each, I would like to take a couple, and allow him 10 per cent. profit. I would recommend an addition, and that is a ventilation in the centre of the roof, made with slats, like Venetian blinds. They are but seldom added to barns, yet I am persuaded that they would be of great service in carrying off the gases that arise from the hay and grain, and which always make it so oppressive to the laborer, when "mowing away" near the roof. The slats can be made to open and shut, by cords coming down to the floor, if that should be preferred to having them stationary. I hope no one who sees this plan will ever build a barn 60 feet long, with a floor running crosswise. I wish, Mr. Editor, that you would procure and publish the plan of an old-fashioned Massachusetts farm-house. [Thank you for the hint. It shall be done hereafter. We had the honor, for so we consider it, of being born and partly reared in one.] Such an one, I mean, as you and I—oh, I forget, you don't know who "I" am—but such a one as used to be common a hundred years ago, having two "square rooms" and a kitchen, with *such a fire-place!* All the plans since contrived are not "improvements."

Blight in Pear Trees.—More indefiniteness. What is blight? First describe the disease, so that everybody can tell what it is, and then I don't care what you call it, or how you cure it. Will somebody tell me if a pear tree ever blighted that had a supply of wood ashes around the roots every year? The same of plums? There are better uses for ashes than throwing them in the street, or selling them to the ash gatherers for "a pound of soap per bushel."

Gardening, No. 2.—Should have been entitled "History of Ancient Gardens," &c. It is an interesting historical article. It never struck my mind so forcibly, before I read it in this article, that "*JESUS CHRIST was buried in a garden.*" And I thought how much more like heathens than Christians, do the most of his followers bury their dead, in the byways and highways of this land, instead of in gardens, and "a field bordered with trees."

Fat Heifers.—I am sorry to be obliged to "guess" that Mr. Clift was not well paid for those very fat heifers sent to our market. I should be pleased to see his "bill of items" of the cost of putting so much fat on two set of ribs. Is it profitable? [Yes; undoubtedly.] That is a question of most importance.

Experiments with Guano.—If you will never publish another article upon this subject, I am willing to concede that guano (huano is the proper name) is the very best manure on earth, or under the earth, or in the air, fire, or water of the earth; but I never will concede that it is good economy to import manure, and waste it, when we might use home-made. I have done with this subject. [My dear Reviewer, don't be so savage over the produce of innocent sea-fowls.]

Polled Cattle.—I always did like them, and don't know what we grow horns for, now the farmers' girls are all too proud to wear "horn combs;" and "horn spoons" are entirely out of fashion. The only use I know for cattle horns, is, to hook sheep to death, or occasionally kill a fine horse, or themselves. As for your assertion that farmers don't regard "*any point at all*" in breeding cattle, it is just no such thing; for, with a few exceptions, like your correspondent, they almost universally regard two very pointed and useless horns.

To keep Land in Grass.—The soil that "a young farmer" speaks of, is probably a sandy one. In that case, it is better not to try to *keep* the land in grass; but sow seed with all small grain, and then break up the meadows whenever it fails—this is my experience.

Hood's Balance Gate.—Something new, and I should think would suit a southern latitude, where, if a man should, "Yankee fashion," build his house almost into the road, he would be set down as "no gentleman;" and where every house has at least one, frequently three or four gates to pass, in the approach to it; "I reckon," such a gate would be "right smart convenient." But the dimensions should be given, and the cost also would be useful. They won't suit all latitudes.

The Garden, No. 2.—This title is too nearly synonymous with "Gardening, No. 2," and should have borne the title of that. But no matter for titles. But few will read the article, and less practise its recommendations. Our American ladies are entirely too effeminate and dyspeptic; and ridiculously full of affectation of delicacy, to engage in so healthy and happy an employment as cultivating the garden. Unpalatable truths these, but truths nevertheless. I wholly despair of inducing the present race of farmers' daughters to return to a life of usefulness, and the time and talent employed in providing such articles as this for their use, is

labor lost. I am more disposed to handle this great error in female education "without gloves." Catch a farmer's daughter in this age of piano thumping, trundling that wheelbarrow, and I will believe in miracles in all time to come. Have patience, I am near a stopping place. A word on

Country Schools.—This article is too discursive; a fault of nearly all writers, using too many words to make a point. I acknowledge my own fault in this particular, but I *larnt* it in these same "country schools," and I learned but very little at them of any real benefit to me in the ordinary pursuits of life, and I never saw one conducted upon the principle of teaching children things and *meaning* of words, instead of mere sounds. I would advise "E. S." that some Southern mothers as well as Northern ones, would make but poor "maternal inspectors of the education of their own girls;" and "good governesses" are not so plenty as blackberries at the North, or black babies at the South.

The Farmer's Dictionary.—One of the best evidences of an improved state of feeling in the public mind is, that such works by such men are undertaken to be written and published, sold, and read; and when ten years ago we could not find a half dozen volumes, upon any agricultural subject, of American printed books, we can now form a handsome library.

Observations on the Potato Disease, &c.—I have no objection to see every one light his taper to illumine this subject, but the cure is yet in darkness. No more is yet known of this disease, as to its cause or cure, than is known of the Asiatic cholera. The theories upon both cases are about equally numerous and contradictory.

The Naturalist.—If I was reviewing that work, I should say that some of its articles were a *little* too prosy, to suit the taste of Southwestern agricultural readers. As I am really anxious for its success, I am sure friend Fanning would take it in kindness if he knew from whence the hint came, when I tell him that he must make the "Naturalist" more interesting than the "Agriculturist" was, or it will never be supported in his latitude. I speak knowingly, and advise for good.

Treatise on Domestic Economy.—I wish I had this work before me, I should like to review it. That American ladies need improving "mentally and physically," I have just said, and therefore agree with you that "there is great need."

I did intend to review the "Premium List for 1845," but I find I am getting prolix, and will therefore only say that 25 premiums of Coleman's Tour certainly show a very strong partiality for a work essentially English, over some others that I think none the worse of for being American. Without any disparagement to Coleman's Tour, I do say that one volume of the American Agriculturist would be worth more, and would be more read by nine-tenths of the recipients of those premiums than all the numbers of this much-puffed "Tour;" and unless the later numbers show a vast improvement over those that I have seen—and I can find ten thousand backers to this opinion. I have said my say.

I shall continue my comments upon one more No., and by that time we shall probably get some

answer to your call upon your readers "anent this matter," as to whether I shall continue the work of a

REVIEWER.

GARDENING—No. 6.

HAVING glanced at the Vegetable Kingdom, considered geographically and historically, let us treat upon the objects of vegetable culture as connected with the subject now before us, which is as follows:—1. To multiply plants. 2. To increase their number and retain or improve their qualities. 3. To increase their magnitude. 4. To form new varieties for the furtherance of all or any of the above objects. 5. To propagate, and preserve from degenerating, approved varieties. 6. To preserve vegetables for future use. The first step for all these objects in common, is to procure the desired plant, either by removing it in an entire state from its native situation, and planting it in an appropriate one; or by gathering and sowing its seeds; or by propagating from a part of the plant itself. Hence the general origin both of agriculture and gardening, and of all the different modes of propagation, transplanting, and collecting seeds. The next step is to secure the plants to be cultivated from the depredations of animals, or unsuitable weather. Hence the origin of fences and enclosures, and plant-habitations. A third step, common to all the above objects of culture, is to remove from the vicinity of the plant to be cultivated, or from the plant itself, all other plants, or animals, or objects likely to impede its progress. Hence the origin of weeding, thinning, destroying insects, and curing diseases.

To increase the number and retain the native qualities of vegetables, it is necessary to imitate, as exactly as circumstances will admit, their native habitation, in respect to soil, climate, mode of watering, light, &c. If the habitation is in any way ameliorated, the qualities of the plant will be altered, and its parts enlarged, which is not desired. All that is necessary, therefore, for effecting this branch of culture, is to imitate the habitation, and to propagate. This ought to be the case wherever plants are grown for medical or scientific purposes, as in herb and botanic gardens.

To increase the magnitude of vegetables, without reference to their quality, it is necessary to afford them an increased supply of all the ingredients of food, distributed in such a body of well pulverized soil as the roots can reach; and of heat and moisture. They should also be partially excluded from the direct rays of the sun, so as to moderate perspiration; and from the wind, so as to prevent sudden dryness. Nature gives the hint in the occasional luxuriance of plants, accidentally placed in favorable circumstances; man adopts it, and, improving upon it, produces cabbages and turnips of twenty-five pounds weight, and apples of one or two pounds; productions which may, in some respects, be considered as diseased.

To increase the number, improve the quality, and increase the magnitude of particular parts of vegetables, it is necessary to remove those parts which are not wanted, such as the blossoms of bulbous or tuberous-rooted plants, when the bulbs are to be increased; the over-luxuriant wood-shoots and leaf-buds of fruit trees; the flower-stems of some, and

the male flowers and runners of others. Hence the important operations of pruning, ringing, cutting off large roots, and other practices, for improving fruits, and throwing trees into a bearing state. At first sight, these practices do not appear to be copied from nature; but man, though an improving animal, is still in a state of nature, and all his practices, in every stage of civilisation, are as natural to him, as those of the other animals are to them. Cottages and palaces are as much natural objects as the nests of birds, or the burrows of quadrupeds; and all the laws and institutions by which social man is guided in his morals and politics, are no more artificial than the instinct which congregates sheep and cattle into flocks and herds, and guides them in their choice of pasturage and shelter.

To form new varieties of vegetables, as well as of flowers, and of useful plants of every description, it is necessary to take advantage of their sexual differences, and to operate in a manner analogous to crossing the breed in animals. This practice is but an imitation of what takes place in nature by the agency of bees and other insects, and of the wind; all the difference is, that man operates with a particular end in view, and selects individuals possessing the particular properties which he wishes to perpetuate or improve.

The preservation of vegetables for future use is effected by destroying or rendering dormant the principle of life, and by warding off, as far as practicable, the progress of chemical decomposition. Hence the herbs or roots, or fruits of some vegetables, are dried; others are placed beyond the reach of the active principles of vegetation, as seeds, cuttings, scions, roots, and fruits; and some are, in addition, excluded from the air, or placed in very low temperatures.

The whole of gardening, as an art of culture, is but a varied development of one or more of the fore-named practices, all founded in nature, and for the most part rationally and satisfactorily explained on chemical and physiological principles. Hence the great necessity of the study of botany to the cultivator.

L. T. TALBOT.

VINDICATION OF THE DUKE OF KENT'S STRAWBERRY.

IN the Boston Magazine of Horticulture, the editor censures Mr. Thomas for recommending the Duke of Kent Strawberry for cultivation, pronouncing it "quite worthless," and seals its fate by saying the London Horticultural Society deem it of no value. When that learned body, and the English gardeners shall have progressed so far as to have discovered that there are two separate and distinct plants in the strawberry, the one defective in the male, and the other in the female organs, to a greater or less extent, and the difference in their size and appearance so great that a blind man can distinguish the blossoms at the distance of twenty feet, I shall pay proper respect to their opinions. I have cultivated the Duke of Kent's several years, to impregnate Mr. Hovey's seedling, and deem it next in value to that valuable strawberry. It is the only plant I have ever met with that comes near meeting Mr. Downing's fancy of a perfect plant. (I here, of course, except the alpine.) It has four merits to recommend it. It is an early

fruit; a good bearer, of fair quality; and what forms its chief quality, and gives it a preference over all other staminate as an impregnator, is, that it can, by its leaf and growth, be at all times distinguished from Hovey's seedling, and other valuable pistillate plants. It has this peculiarity of blossom, whilst a large portion of them are perfect in both organs, some will be found on the same stem wholly defective in the male organs, and depending on their neighbors for impregnation. There are many famous English staminate, and Hovey's Pine and Buist's seedling among them, valuable as impregnators; but in my opinion, as impregnators only. The objection to them is, that they will not average one-third of a crop, and are not so distinct in appearance as the Duke of Kent's.

The *Roses Phoenix* is one of the best bearers among them, but I have never yet seen it bear one-third of a crop of perfect fruit. I this season gave the famous English varieties, the *Swainstone*, *Downton*, *Emperor*, *Myatt's Pine*, and some others, a fair trial; not one-half of their blossoms bore perfect fruit. Even our scientific English gardeners now distinguish the difference between the staminate and pistillate blossom, and the barren character of the former, and their indispensable necessity for impregnating Hovey's, and other pistillates; but gravely assure us all blossoms were perfect in both organs in England—that it is a change effected by our climate, and that they would at once change their character if sent back to England. I trust Mr. Hovey will, by experiments, this season, ascertain the character of his old seedling, and that his experiments will be sanctioned by the report of the committee of the Boston Horticultural Society, and other cities in future be supplied with this delicious fruit, as abundantly and as cheap as we are in *Cincinnati*, and a theory heretofore denounced by the learned, because it was first practised by an illiterate market woman, received with favor. My only fear is, that the poor woman may have her merit detracted from, by their showing, that although *Linnaeus* scouted at it, the doctrine was fully tested and believed in by some of his disciples; that even *Kean* discovered it, in one variety, and made it known to the London Horticultural Society.

Cincinnati, June 19, 1846. N. LONGWORTH.

TO MAKE WATER COOL FOR SUMMER.—The following is a simple mode of rendering water almost as cold as ice:—Let the jar, pitcher, or vessel, used for water, be surrounded with one or more folds of coarse cotton, and be kept constantly wet. The evaporation of the water will carry off the heat from the inside, and reduce it to a freezing point. In India, and other tropical regions, where ice cannot be procured, this is common.

WHAT IS BLIGHT?—It is a sun-stroke, or a frost-bite, a plague of insects, or of fungi, a paralysis of the root, or a gust of bad air; it is wetness, it is dryness, it is heat, it is cold, it is plethora, it is starvation; in short, it is anything that destroys or disfigures foliage. Can a definition be more perfect? We should expunge the word as a substantive term from our language, and only use it in its adjective sense.—*Dr. Lindley*.

HINTS ON THE CONSTRUCTION OF FARM-HOUSES.

ANY one may see that a decided taste is beginning to manifest itself at the present moment in rural architecture. Everywhere, in the Middle and Eastern States, one sees that the newly-built cottages and villas are no longer in those clumsy and unmeaning forms that ten years ago so generally prevailed.



FIG. 58.

cultivates. It is the home of the best virtues and the soundest hearts. It must necessarily—if it be true to itself—give a character of moral and physical beauty to the whole rural scenery of the Union. Let us not deny, therefore, the importance of the farm-house. It seems to us to be worthy of the attention of every one who would render our country life expressive of its true usefulness and beauty.

We should be glad, in this brief space, to say a few words about farm-houses; our limits will, however, only permit us to point out a few errors into which our country builders have hitherto fallen.

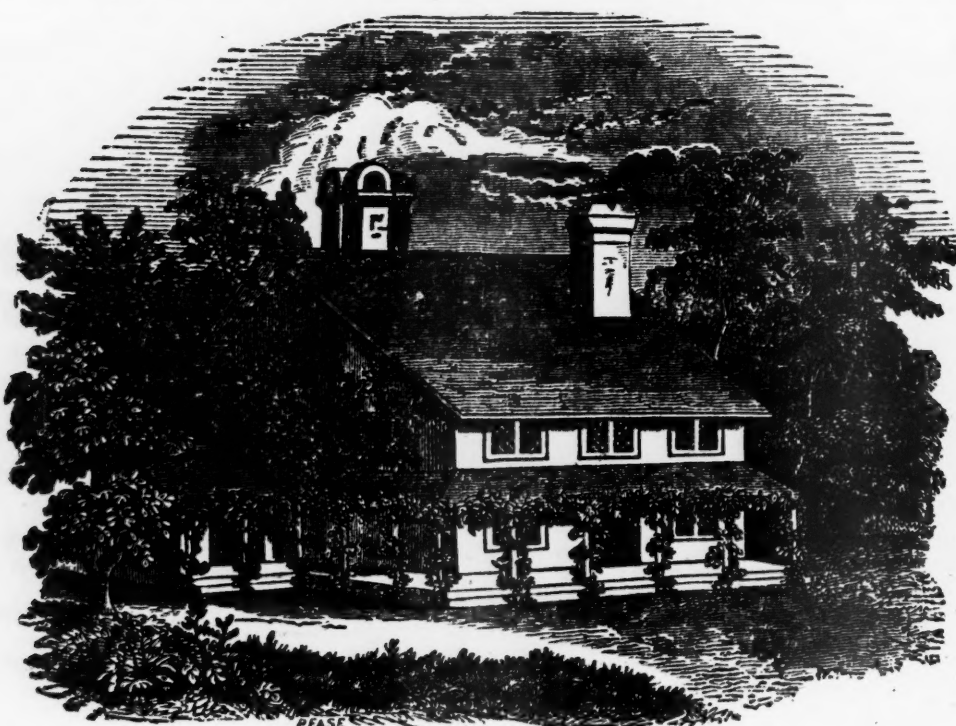


FIG. 59.

but to which he has been persuaded to add a Grecian portico (fig. 58), copied from a great house of the neighboring town or village.

The portico is very well where it belongs—as a part of a handsome villa, every part of which is carefully finished with corresponding elegance. It has nothing whatever to do with a true farm-house. It

This is a most hopeful and encouraging symptom. It tells us very plainly that our country proprietors have begun to give some thought to the construction of their own houses; that they are no longer content with what the nearest carpenter or mason may have to offer as the latest style; that they have at least a desire for something fit for their own wants, the beauty of which is of a kind, becoming and suitable to the purpose in view.

In this aspect of things, nothing is more to be desired, than the general prevalence of correct principles of taste among our agriculturists of intelligence.

The Farm-house in this country is not the hovel of the serf—is not the hut of a peasant. It is the cottage of a freeman—the proprietor of the soil he

Something may perhaps be gained even by considering the mistakes into which those most commonly fall, who have built with little reflection.

In the first place, we think a farm-house should be *unmistakeably a farm-house*. That is to say, it should not be a citizen's dwelling-house, or a suburban villa, set down in the midst of a plain farm.

Nothing has been more common for the past ten years, than to see a good substantial farmer building a large plain dwelling—unobjectionable enough as a plain dwelling—

is too high to be comfortable by its shade or shelter. It is too costly and handsome to accord with the neat and rustic character of a farm-house. But it has been the fashion of the day, and if the farmer has not reflected for himself, it is ten to one that he has fallen a victim to it, instead of employing the more comfortable and more characteristic verandah. Fig. 59.

Another of the greatest mistakes in building a farm-house, is to adopt anything like a *flat roof*. Fig. 60. A broad and rather high roof is as essentially a handsome feature in a farm-house, as the expanded chest and broad shoulders are in the farmer himself. It is a kind of beauty that springs out of a most natural and enduring source—manifest utility.

The roof of a farmer's house ought then to be high, so as to give him an ample garret—that useful store-house of country varieties. It ought to be rather steep, to bear and carry off rapidly the burdens of heavy snows and the violence of wintry storms. It ought to be strong, and little liable to speedy decay—that the purse may not be called on for frequent repairs.

The flat roof comes to us from southern countries and mild climates. In town-houses, and ornamental villas, in the classical styles, let the architect satisfy the demands of art with such a covering to his house. But in the exposed farm-house, in our blustering, sturdy weather of the north, the farmer should have none of it. He must nestle under the high and broad roof which properly belongs to a northern climate. Fig. 61. This has all the beauty of thoroughly answering its purpose, and conveying at a glance the most complete notions of comfort.

When it is desired to render a farm-house ornamental, it is the most fatal, though the most common of all mistakes, to suppose it should be done by the imitation—the meagre imitation of some gentleman's fine house. It is a mode that is never successful. It is the old story of the jay in his borrowed peacock's plumes. Every one detects and exposes the want of fitness and propriety. Fluted columns, ornamental pediments, moulded friezes, and the like, have little or nothing to do with farm-houses. They will give an ambitious and flashy character to the front; it will be belied by the useful and *every-day* character of the rear.

The truth is, a farmer's house looks as ill when bedecked with the stolen ornaments of a highly architectural villa, as the honest dignified, plain farmer himself would, if tricked out in the fashionable finery of the reigning Paris exquisite. The beauty of *propriety* is a species of moral beauty, even in houses and clothes.

There should be a kind of homely, country-like air about every genuine farm-house. It ought at the first glance to be recognized as belonging to the open meadows, orchards, and pastures, that surround, and the fresh luxuriant trees that wave over it. It should be neat and strong, and capacious and comfortable. If something is wanted beyond this—and we are sure our farming

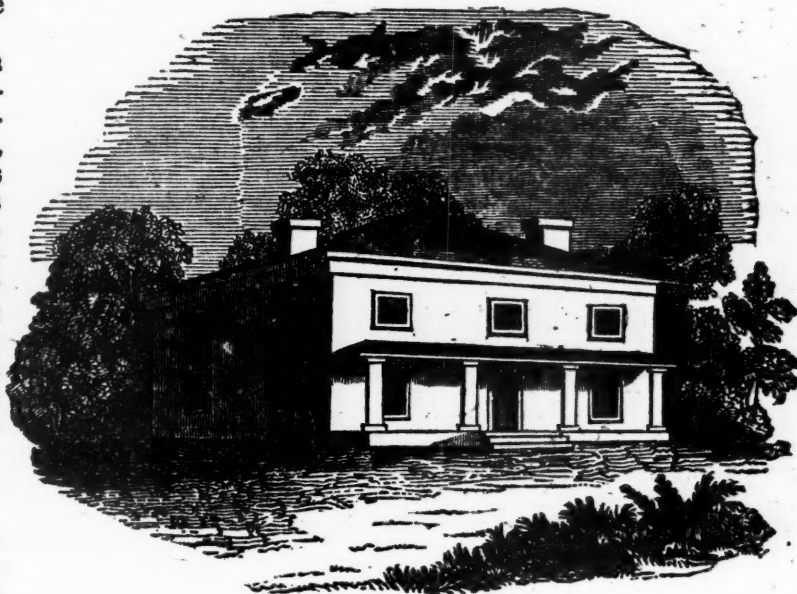


FIG. 60.

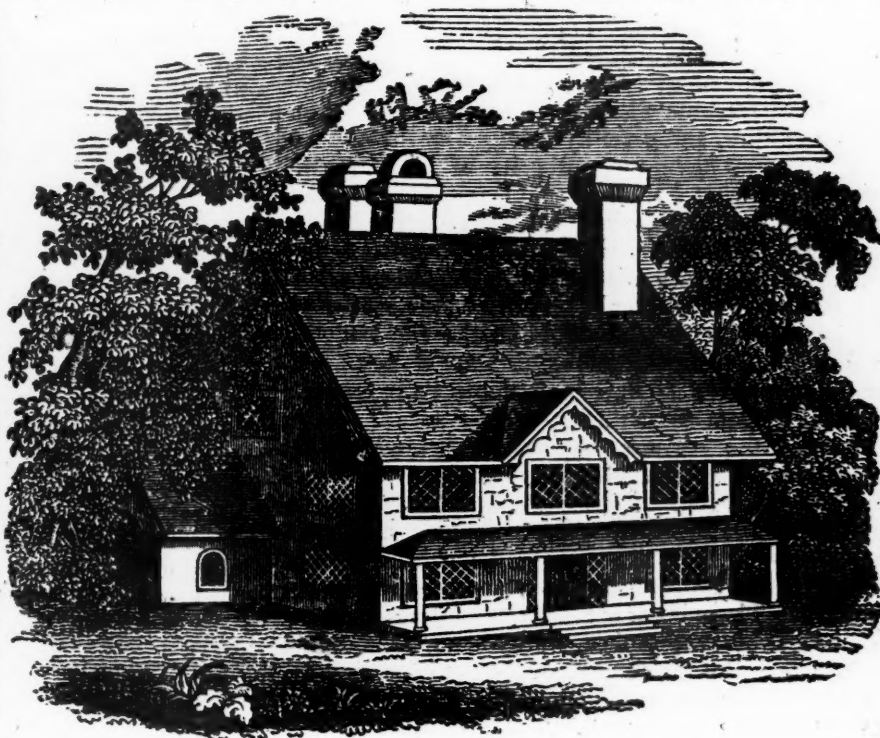


FIG. 61

countrymen will more and more desire a manifestation of the agreeable about their houses—then, should something ornamental *combine itself with the most important and useful features* of the house let a *verandah* be added, which may be adorned, not so much with expensive pillars, as with beautiful and fragrant climbing plants. Let the porch be made a suitable covering to the principal entrances. Let the gables be enriched with simple ornaments, and the chimney stacks be built in some pleasing forms. These are the first points that really demand attention in a farmer's house, which we wish to raise to its highest expression of fitness and beauty. Some examples of this kind of rural architecture we hope to be able to offer at no distant time. These trifling hints may perhaps lead some agricultural friend to consider what is essential to the character of a farm-house, and thus at least prevent his marring the beauty of simplicity and propriety.—[From the Transactions of the N. Y. State Agricultural Society, for 1845.]

A. J. DOWNING.

Highland Gardens, Newburgh, Jan., 1846.

PRESERVATION AND APPLICATION OF MANURES.

THERE is nothing so important, in the art of agriculture, as the *restoration and preservation of the fertility of the soil*. As the proper mode of preserving and applying manures contributes greatly to this object, nothing should more sedulously engage the attention of farmers. Liebig's celebrated work on organic chemistry contains a great deal of valuable information on this subject. But as this work is in the hands of but few farmers, I have thought I could not render a more acceptable service to them, than by collecting, in a more condensed form, the highly important suggestions, on this subject, of this distinguished writer on agriculture and physiology, which are to be found in his work on "Organic Chemistry," in its application to Agriculture, and on Physiology.

That I may have the authority of his name in support of what I shall say on this subject, I shall make frequent references to his work, simply giving the page. And I wish it distinctly understood that wherever there is a reference without the name of the author, it is to the above work.

Manures may be defined to be those substances which are capable of being *assimilated* by plants, and which serve as *food* to promote their growth, and bring them to maturity—p. 53-4. They are either of the *organic*, or *inorganic* kind. The *elements* of the former are oxygen, hydrogen, carbon, and nitrogen. These *elements* are furnished to plants in the form of water, carbonic acid, and ammonia—p. 147. The *inorganic* substances are found in the ashes, after the incineration of plants—p. 147. These latter are of a fixed nature, and cannot be lost by evaporation, nor by being transformed into gases. But the *elements* of the organic manures, in an *uncombined state*, commonly exist in the form of a volatile gas, and are, therefore, more subject to be lost to the agriculturist than manures of the *inorganic* kind.

It has, however, been wisely arranged by a kind Providence, that these gaseous substances shall

contribute amply, aided by man's industry, to the nourishment of plants and animals.

The atmosphere, by which the earth is surrounded, is composed of one-fifth oxygen, and four-fifths nitrogen, nearly, and contains 1-2500 part, by weight, of carbonic acid—pp. 55 (note) and 167. As small as this proportion may appear, Liebig remarks that, "it is quite sufficient to supply the whole of the present generation of living beings with carbon for a thousand years, even if it were not renewed." Here, then, is an ample sufficiency of oxygen and carbon, provided plants are capable of assimilating these substances.

Now it has been well ascertained, that all plants growing in contact with the atmosphere absorb carbon and oxygen, not only by their roots, when the soil is kept loose and pulverized, so that the air can obtain access to them, but still more abundantly by their leaves, and other green parts—pp. 172-3, 179-80-3.

Liebig remarks, that by loosening the soil which surrounds young plants, we favor the access of air, and the formation of carbonic acid; and on the other hand, the quantity of their food is diminished by every difficulty which opposes the renewal of air—p. 106. In the preceding page he says an atmosphere of carbonic acid surrounds every particle of decaying humus.* Hence may be seen how important it is that farmers should keep the soil about growing plants in a complete state of pulverization.

Water is composed, by weight, of one part of hydrogen, and eight of oxygen—p. 122, note. And as plants possess the power of decomposing water—p. 122; and assimilating hydrogen, one of its component parts, they have thus an opportunity of acquiring this ingredient of their composition. During the progress of growth, plants appropriate carbon in the form of carbonic acid and hydrogen from the decomposition of water, the oxygen of which is set free—p. 125.

Thus it appears that nature has made ample provision for supplying growing plants with oxygen, hydrogen, and carbon; the *second* by the power which plants possess of decomposing water, and the other two by their capacity of absorbing them from the atmosphere. Carbon is absorbed so abundantly from the atmosphere, that, in the opinion of Liebig, plants need none from the soil *after* the formation of their leaves; and, in his opinion, they give back to the soil more than they receive from it—p. 116. The decomposition of water furnishes a full supply of hydrogen, and oxygen is supplied not only from the atmosphere, but from water, which contains the element in solution—p. 214.

But although four-fifths of the atmosphere is composed of nitrogen, yet as plants have not the power of decomposing it, they can derive no nourishment from that source. Yet this element is so essential to the growth of plants, that Liebig is of opinion they cannot "attain maturity, even in the richest

* Humus or geine, as it is called by Berzelius, includes all the decomposed organic matters which are found in the dark surface soil of rich lands, in various states of combination, such as humic, crenic, and appocrenic acid, &c. &c.

vegetable mould, without the presence of matter containing nitrogen."—p. 126.

Before the time of Liebig, it was a matter of great doubt whence the nitrogen was derived, which was found in the composition of plants, and without which they could not attain maturity. To him we are indebted for the discovery, that this essential food of plants is derived from ammonia,* a gaseous substance contained in the atmosphere, and being extremely soluble in water—p. 130—is brought down to the earth by dews, rain, and snow, and thus furnishes *growing plants* with nitrogen, an ingredient indispensably necessary to their existence. Ammonia has a powerful affinity for water; consequently that portion of it, which is not taken up by the roots of plants, is liable to be carried off by evaporation, unless the soil contains, or is furnished with, substances capable of converting it into a salt, and thus fixing it in the soil. Liebig has entered into some nice calculations to show what quantity of ammonia is given to the soil by rains, dews, and snows, *annually*—p. 131; but is of opinion that the quantity, though great, is not sufficient for the purposes of agriculture—p. 141, and hence the necessity for an additional supply, which I will hereafter show may be supplied by stable and other manures of the solid and liquid kind. As the nitrogen furnished by ammonia is so essential to the growth of plants, and as the quantity thus obtained is not a full supply, and a part of it is, moreover, liable to be carried off by evaporation, it is of the utmost importance to agriculturists to use the most efficient means of fixing it in the soil, as it is brought down by rains, dews, and snows.

This may be completely effected by strewing a small quantity of gypsum upon the soil, which, combining with ammonia forms soluble sulphate of ammonia and carbonate of lime, which, possessing no volatility, is retained in the soil—p. 142.

Gypsum is very slightly soluble in water, and is very slowly decomposed by carbonates, and hence it may continue in the soil for several years—p. 144.

Powdered charcoal acts in a similar manner, and has a powerful tendency in fixing ammonia in a soil—p. 146. Decayed wood has also a similar tendency, and is almost as powerful as charcoal—p. 146.

Each of these substances may be resorted to for fixing in the soil the ammonia derived from the atmosphere, but undoubtedly ground gypsum (sulphate of lime) is the best adapted to the purpose, and ought to be resorted to, if to be obtained upon reasonable terms.

It is proper to remark that some soils have already a due proportion of gypsum combined with them; and in that case no additional supply will be needed. This can be best ascertained by analyzing the soil.

Before I proceed to speak of stable and other manures, in the solid and liquid form, I must take some notice of the inorganic manures, that is, of those substances which are found in the ashes of plants.

* Ammonia is a compound gas, consisting of one volume of nitrogen, and three of hydrogen.

Upon the incineration of every species of plants there are found, in the ashes, certain inorganic substances of such a fixed nature, that they cannot by any degree of heat be made to assume the gaseous state. Among these are the alkalies, and the alkaline earths, phosphates, silica, manganese, oxides of iron, &c., and various acids, combined with alkalies, and alkaline earths, &c. All these inorganic substances are not found in every species of plants; but that they are essential to the growth of plants, in whose ashes they are found, is an irresistible inference from the fact, that they are *invariably found* in such ashes, with this exception, that one alkali or alkaline earth may be substituted for another. Thus, if a plant, in whose ashes *soda* is usually found, should be planted in a soil where there is potash, but *no soda*, upon incineration there will be found the alkali potash, which has thus been substituted for the alkali soda, and so *vice versa*. And if there should be neither *soda* nor potash, in the soil, these plants, whose appropriate food is *soda* or *potash*, would substitute one or more of the alkaline earths in its stead—p. 200. And the acids combined with these alkalies, are *always* in proportion to their bases, so that the quantity of the one *always regulates the other*—pp. 148-9-50.

Nothing can more strongly show the absolute necessity of alkalies, or alkaline earths of one kind or another in plants. For if they are so situated as not to be able to procure a supply of their appropriate alkali, they invariably supply themselves with another, or even with an alkaline earth as a substitute. But one or the other *they must have*. Certain inorganic acids are also essential to the growth of plants, but these are always found combined with their bases, and in *suitable quantity*. Phosphoric acid has been found in the ashes of *all plants* hitherto examined, and always in combination with alkalies, or alkaline earth—p. 200.

Among the inorganic substances, the alkalies are the most important. They are found in different plants in the form of silicates, tartrates, citrates, acetates, oxalates, &c.—pp. 214-15. So important, in the opinion of Liebig, are alkalies in a soil, that even those which are the richest in humus must become barren and unfruitful when their alkalies are exhausted, and will remain so until they shall again be supplied with a due proportion of these indispensable ingredients—p. 196. Some of the inorganic substances exist in such great abundance that there is no danger of there ever being a deficiency in the soil. Among these is silica—p. 215 (note), an ingredient which is essential to all plants of the grass kind—p. 200; and to all the grain tribe. The inorganic acids, or such as combine with inorganic bases, also exist in great abundance, so much so that wherever the base is found, it is accompanied by its due proportion of acid. Liebig says the most important object of agriculture is to furnish the soil with *nitrogen*, "in a form capable of assimilation"—pp. 233-4. He might have added that it is equally important where alkalies are deficient, or when they have been exhausted, that they should also be supplied.

It has been seen, that of the *organic* manures the *only one* not furnished, in adequate quantity, by the atmosphere, and the elements of water, is *nitro*.

gen, and that, among the *inorganic* manures, the most important are the alkalies and alkaline earths. I will now proceed to inquire whence the deficiency in these indispensable ingredients can be derived. It has already been shown that a large proportion of the requisite supply of nitrogen is obtained from the ammonia of the atmosphere. A part of the unavoidable want of the alkalies, and other *inorganic* ingredients, is derived from the same source. Liebig, when treating on this subject, remarks that, "as thousands of tons of sea-water are annually evaporated into the atmosphere, a corresponding quantity of the salts dissolved in it, viz., of common salt, chloride of potassium (a combination of chlorine and potash), magnesia, and the remaining constituents of sea-water, will be conveyed by wind to the land." "By the continued evaporation of the sea, its salts are spread over the whole face of the earth, and being subsequently carried down by the rain, furnish to the vegetation those salts necessary to its existence. This is the origin of the salts found in the ashes of plants, in those cases in which the soil could not have yielded them"—p. 166.*

An attentive consideration of the foregoing suggestions will show the importance of serving and applying not only the alkalies and alkaline earths, but also stable and other manures, in which more or less *nitrogen* is contained. These are ingredients essentially necessary to all growing crops, and which are furnished the most sparingly by a bountiful Providence, and hence the necessity for the care and industry of man, not only to preserve those which are supplied by nature, but to collect and apply those which are placed within his reach. This is a subject of too much importance to be passed over lightly, and as this article is already sufficiently extended, I must postpone any further remarks upon it for the present.

Prospect Hill, Ky., June, 1846. A. BEATTY.

QUERIES ON BUTTER-MAKING.

HAVING never met with any plain practical directions for churning, or separating the butter from milk, I have taken the liberty to call upon you for information. The time occupied by this process frequently varies very much—say from half an hour to two hours; and when we consider that during summer it has to be performed daily, a proper acquaintance with the principles on which the operation depends, is of material consequence to the farmer, and no doubt in this age of improvement, the information could easily be imparted by some of your more scientific correspondents.

The variety of opinions published from time to time, so far as I have seen, fall short of a correct system. Information on the following points seems to me to be particularly desirable:—

1. Should the entire milk be churned, or only the cream?

* According to Marcet, sea-water contains chloride of sodium, sulphate of soda, chloride of potassium, chloride of magnesium, and sulphate of lime. These are the most important ingredients among the *inorganic manures*, and amount to about 40-1000 parts of sea-water. (See note, p. 166.)

2. Should whatever is churned be sweet or sour?
3. Is there any point of rancidity at which the butter separates more readily?

4. By what means is such a point ascertained?

5. Is there any advantage to be derived in the use of saleratus when the butter is hard to come?

6. Will sour milk produce more butter than fresh?

7. What is the proper temperature for the process of churning?

8. How many revolutions per minute should the dash make, in a semicircular churn?

Answers to the above queries, with any other information on the subject, will much oblige

June 29, 1846.

A SUBSCRIBER.

Our correspondent will find many plain, practical directions on butter-making, in our back volumes, particularly in Vol. 1, p. 126; Vol. 2, p. 263; Vol. 3, pp. 48 and 237; Vol. 4, pp. 234 and 320. Questions 1, 2, and 6, parties differ entirely in their practice, churning either milk or cream as is most convenient. Some contend that sour milk or cream gives the most butter; others, equally practical, deny this, and say, that it makes no difference. Questions 3, 4, and 5, we cannot answer. Question 7. In New York the milk is churned at a temperature of 50 to 60 degrees; in England at 60 by horse or water power, and as high as 68 by hand power. The reason for churning at a lower temperature by horse power is, that the motion is quicker and steadier than by hand. When the temperature is as low as 50 degrees, the butter is a long time coming; at 60 to 65 it comes very readily. Question 8. The dasher is generally moved at the rate of 60 to 75 revolutions per minute. We shall be obliged if any of our readers can reply to "A Subscriber" more fully and exactly than we are able to do.

DOMESTIC FISH-PONDS.—No. 3.

Operations of Spawning and Hatching.—From careful examination made by those who have attentively studied the habit of oviparous fishes, the natural processes of spawning and hatching appear to be well understood; the hard roe of a fish being composed of a great number of small, roundish substances like little seeds, each of which is called an *ovum* or egg, and produces, when hatched, a fish. In some kinds of fish, these ova undergo a development, more or less complete, in the oviduct of the parent, while, in others, they are further perfected in water—although, in several instances, they seem far from being understood, and no description of the process has ever been attempted.

The natural spawning-bed, of many species, it is now well ascertained is not made by the plowing of the fish's nose, as has been asserted by some; but by the action of the tail of the female, throwing herself at intervals of a few minutes each, upon one side, and while in this position, by the rapid movement of the tail, she digs a hole in the gravel for the reception of her ova, a portion of which she therein deposits; and again turning on the side and covering them up by the renewed action of her tail,—thus alternately digging, deposit

ing, and covering the ova, till the process is completed, which often occupies three or four days.

The subject of artificial hatching has been much elucidated by the labors of Professor Agassiz, Sir Francis McKenzie, and others, particularly by Mr. Shaw, who has long and successfully been engaged in the artificial process, in his highly interesting investigations on the growth of salmon, at Drumlanrig, in Scotland. How long the ova may remain extruded from the body of the female, and continue susceptible of the fecundating influence of the milt of the male, has not, as far as my knowledge extends, hitherto been ascertained. Mr. Shaw states that, "in one instance, the female had been dead for nearly two hours, without the vital principle being in the slightest degree affected." Nothing can be simpler than collecting the spawn which has recently been impregnated; or than fecundating it artificially, by securing the parent fishes, when engaged in the process of spawning, confining them in some receptacle, prepared for them, and then disposing it at pleasure. If left in its native bed, immense quantities are consumed, both in the state of ova and young fry, by older individuals of their own species, by fish of other kinds, by newts, lizards, aquatic birds, and various other foes; whereas, by a little care, the ova can be hatched in perfect security, and the young fry committed to the pond, or river, as soon as they have the ability to elude the pursuit of their destroyers.

In illustration of this subject, the following instance is quoted from an account lately published by Sir F. A. McKenzie: "On the 23d of November, 1840, four pair of salmon were caught and placed in a small artificial pool. A pair having commenced spawning, on the following day they were carefully caught, and from the female about twelve hundred ova were gently squeezed into a basin of water, and an equal quantity of milt from the male fish; the two were gently stirred and mixed, and allowed to rest for an hour, when the whole was deposited and spread in one of the wicker baskets recommended by Prof. Agassiz, having about four inches of gravel beneath them, and two or three inches above them. A similar quantity of ova, treated in the same way, was also deposited in one of the copper-wire bags used by Mr. Shaw; and both were immediately placed under water in the pool. In another instance, the ova and milt were squeezed directly into the basket and copper-wire bag, having gravel beneath, and two inches of gravel placed over them, and they, too, were deposited in the pool. Some of the impregnated ova were also buried in the open gravel about three inches deep. On the 18th of April, after one hundred and forty-six days, the baskets and bags were opened, and the young fry appeared as numerous in them, as from that which had been left free in the gravel. In one set of the baskets not above five per cent. appeared unproductive;" and hence Sir Francis's conclusion can hardly be disputed, that the breeding of salmon, or other fish in large quantities, is, comparatively speaking, easy; and that millions may be produced protected from danger, and turned into their natural element at a proper age.

Boccus, in his treatise on the "Management of Fresh-water Fish," gives in a few words the following directions for the common European trout (*Salmo fario*), which doubtless would apply to many other kinds of fishes: "Take one of the boxes I have described under the head of stew-boxes, and fill the bottom with good clean, moderately fine gravel. In the month of November, or about four weeks before spawning, place in the box a spawner and a milter of good size, sink it in a deep stream, where there is plenty of water, and when the fish have cast, take them out and turn them adrift. Then move the box into shallow water, which being influenced by the rays of the sun, will early bring forth the fry. Keep them in the box until they are about half an inch long, after which turn them out on the shoal water."

Successful experiments in spawning, have also been made with the trout by King Leopold, in Belgium, who has a large establishment for propagating fishes near his new palace of Ardennes.

Whether the plan of hatching fry under fowls, adopted by that very wonderful nation, the Chinese, can ever be practised with advantage in this country, I am not prepared to say; but, as a curious instance of the ingenuity of that extraordinary people, it may not be uninteresting to give some account of it. For this purpose the spawn is collected from rivers and lakes, and disposed of to proprietors of ponds. When the hatching season arrives, they empty a hen's egg of its natural contents, for which they substitute the spawn. The opening in the shell is then closed up, the egg put under a hen, and after a few days, is removed, re-opened, and placed in a vessel of water warmed by the heat of the sun, where it is kept until the young fry are developed, and acquire sufficient strength to bear the ordinary temperature of common water. It is by such means and care as this, according to Du Halde, that the vast population of the celestial empire, even in inland districts, can obtain excellent fish, at the rate of about a cent a pound.

When once properly impregnated, the ova of all fish can be conveyed in boxes of gravel with success, as correctly stated by Professor Agassiz, in water of moderate temperature, even across the Atlantic, as safely as if they were naturally deposited by the parent fish in its new locality; so that any quantity of spawn may be conveyed from one stream to another, however distant they may be situated.

D'JAY BROWNE.

New York, July 15, 1846.

TO MAKE BACON.—To each ham or piece of pork, weighing from 15 to 18 lbs., take one tablespoonful of saltpetre, pounded fine, one ditto Cayenne pepper, and with a sufficient quantity of Liverpool salt to be well rubbed. After this, each ham is to be laid on a plank, skin downwards, and covered well with a layer of salt. In that situation it is to be left for 7 weeks; after which, hang them up with *hock end* downwards, in the smoke-house, for 2 months. Every morning fresh smoke, and in very cold or damp weather smoke them continually. When the hams come from the smoke-house, they are to be packed down in hickory ashes.

NEW YORK STATE AGRICULTURAL SHOW.

THE N. Y. State Agricultural Society holds its Sixth Annual Show at Auburn, on the 15th, 16th, and 17th of September next.

This place was selected because of its central position, and also because of its being readily accessible to the farmers resident in the southern tier of counties, who have hitherto been less accommodated by the annual position of the show than almost any other portion of the state. But Auburn being directly on the railroad, and at no great distance from the Cayuga and Seneca lakes, where the great bulk of the business and travel of these counties debouches, it is hoped and believed that their agricultural population will feel themselves bound to co-operate with the more central counties, who are already known to make great efforts to sustain the high character of New York's annual agricultural show. If a judgment may be allowed, based upon the preparations already made, the approaching fair will be the most splendid ever held in this state. Being in the immediate neighborhood of some of the most noted breeders of cattle, sheep, and horses, there can be no doubt but that the display will be admirable. It is confidently predicted that the yokes of working cattle will be unrivalled.

The State Show has hitherto received, as it has deserved, the liberal countenance of the agricultural public. The Society's efforts to render the show attractive and useful are unabated, and it hopes that every friend of agriculture will cordially and zealously do his best to ensure at least its accustomed and annual reward.

The arrangements made by the citizens of Auburn are ample and satisfactory. *There is room, and a hearty welcome for all.*

For the first time a committee of ladies take part in our proceedings. The display of female skill and taste has always given brilliancy and lustre to the State Show, but as the whole matter is now placed exclusively in the hands of ladies, it is hoped that the wives and daughters of farmers will feel the weight and the extent of their responsibilities.

An examination of the annexed list will show that the committees are selected with care, and that they are composed of persons of great practical experience and high moral character.

The Committees on the Premium list were appointed as follows:—

Committee of Arrangements, and for Selecting the Show Ground, and preparing it for the coming Exhibition.—J. M. Sherwood, J. H. Chedell, C. C. Dennis, Auburn; Wm. Fuller, Skaneateles; H. S. Randall, Cortland Village; J. B. Nott, Albany; S. M. Brown, Elbridge; A. Thompson, Aurora.

Committee for Reception of Strangers.—E. T. Throop, Willow Brook; A. Conkling, Melrose, W. H. Seward, Chris. Morgan, E. A. Worden, T. Y. How, Jr., S. A. Godwin, Auburn.

1ST CLASS.—*Durham Cattle.*—Gov. Allen Trimble, Ohio; Henry Parsons, Ancaster, Canada West; L. Chandler Ball, Hoosack.

2d, 3d, AND 4th CLASSES.—*Hereford, Devon, and Ayrshire Cattle.*—Elias Phinney, Lexington, Mass.; Lemuel Hulburt, Winchester, Conn.; Edward Cox, Black Rock.

5th CLASS.—*Crosses of Native and Improved Cattle.*—Ira Hitchcock, Vernon; Lewis G. Morris, Morrisiana; John Randall, Norwich.

6th CLASS.—*Native Cattle.*—Wm. Garbutt, Wheatland; Thomas Hilhouse, Albany; Samuel Stevens, Preble, Cortland county.

WORKING OXEN.—Sanford Howard, Albany; Wm. Fuller, Skaneateles; John Ayrault, Perrinton.

STEERS.—Gideon Ramsdell, Perrinton; Francis Hibbard, Cortland Village; Hiram Clift, Marcellus.

FAT CATTLE.—John Holcomb, Wilmington, Delaware; Thomas Kirkpatrick, Albany; A. L. Freeman, Jordan.

FAT SHEEP.—Elias W. Cady, Dryden, Tompkins co.; Wm. Osborn, Auburn; — Hayden, Syracuse.

STALLIONS OF ALL WORK AND DRAUGHT, AND MARES.—Adam Ferguson, Watertown, Canada West; Elbert Jones, Oyster Bay; Henry K. Morrell, Caroline county.

BLOOD STALLIONS AND MARES.—James Bathgate, Fordham; D. D. Campbell, Schenectady; Gen. Daniel Jones, Cold Spring, Queens county.

BEST MATCHED AND SINGLE HORSES.—Edward Long, Cambridge; William A. Dutcher, Penn Yan; Wait S. Davis, King's Ferry.

LONG WOOLLED SHEEP.—Philip Reybold, Wilmington, Del.; Samuel Cheever, Stillwater; Augustus Rayner, Clarence, Erie county.

MIDDLE WOOL.—Wm. Howitt, Guelph, Canada West; Paoli Lathrop, South Hadley Falls; Benjamin Enos, De Ruyter.

MERINO SHEEP AND THEIR GRADES.—Robert R. Reed, Washington, Pa.; Edward A. Le Roy, New York; N. B. Smith, Woodbury, Conn.; Samuel Lawrence, Lowell, Mass.; S. Newton Dexter, Oriskany.

SAXON SHEEP.—Adam Hildebrand, Massillon, Ohio; Daniel Rogers, Hosack Corners; William McKee, Salem, Washington county; John A. Tainter, Hartford, Conn.; Homer Blanchard, Kinderhook.

SWINE.—G. V. Sackett, Seneca Falls; P. N. Rust, Syracuse; E. L. B. Curtiss, Danby, Tompkins co.

POULTRY.—L. B. Langworthy, Rochester; Thomas Hollis, Gilbertsville; Edward Mesier, Fishkill.

PLOWS.—C. C. Dennis, Auburn; Enoch Marks, Fairmount; S. N. Wright, Vernon.

HARROWS, WAGONS, &c.—Samuel Greenleaf, Canandaigua; E. P. Beck, Sheldon, Wyoming county; Israel Boies, Homer.

CORN AND COB CRUSHER.—George Geddes, Fairmount; Kingsley Sanford, Volney, Oswego county; Cornelius Bergen, Brooklyn.

PLOWING MATCH.—John Johnston, Geneva; John Finch, Astoria; David Matthews, Truxton; Henry Brewer, Enfield; Paris Barber, Homer.

BUTTER.—Z. Barton Stout, Allen's Hill; Andrew Dickson, Cortlandville; Aaron Petrie, Little Falls.

CHEESE.—Hon. Wm. C. Crain, Warren, Herkimer county; Lewis Eaton, Black Rock; Elijah Morse, Eaton.

MAPLE AND CORN-STALK SUGAR.—Otto F. Marshall, Wheeler, Steuben county; Robert Hadfield Sheldon, Wyoming county; William Blossom, Canandaigua.

SILK.—Joel F. Belcher, Richford, Tioga county; Charles Pardoe, Skaneateles; Edw. Morgan, Aurora.

DOMESTIC MANUFACTURES.—Roswell Randall, Cortlandville; Curtis Moses, Marcellus; Moses D. Burnett, Syracuse.

FRUIT.—John A. King, Jamaica, L. I.; W. L. De Witt, Ithaca; R. T. Underhill, New York.

FLOWERS.—Herman Wendell, Albany; Wm. N. Randall, Cortlandville; — Tracey, Syracuse.

MISCELLANEOUS ARTICLES NOT ENUMERATED OR SPECIFIED.—R. L. Allen, Buffalo; J. T. Cooper, Albany; William Jackson, Syracuse.

VEGETABLES.—L. A. Morrell, Lake Ridge; George J. Pumpelly, Owego; Henry Morgan, Aurora.
STOVES AND OTHER MANUFACTURES OF IRON.—C. N. Bement, Albany; Samuel T. Pratt, Buffalo; Franklin Manning, Syracuse.

PAINTINGS AND OTHER DRAWINGS.—Francis Rotch, Butternuts; — Walker, Utica; Gen. John A. Granger, Canandaigua.

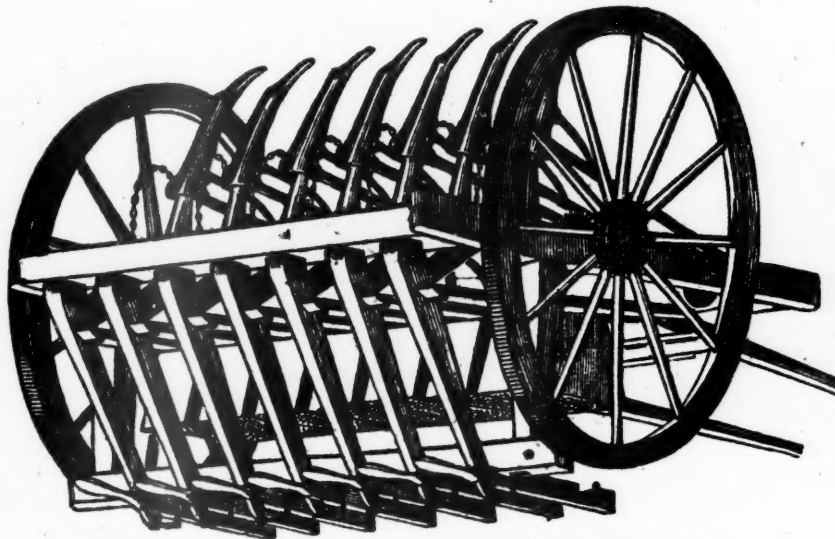
ORNAMENTAL, SHELL, NEEDLE, AND WAX WORK.—Mrs. B. D. Coe, Buffalo; Mrs. Hanson Cox, Auburn; Mrs. Alvah Worden, Canandaigua; Mrs. Wetmore, Utica; Mrs. W. W. Watson, Geneva.

UNENUMERATED IMPLEMENTS, AND OTHER ARTICLES.—J. J. Viele, Troy; J. B. Viele, Troy; J. B. Duane, Schenectady; Stephen B. Cushing, Ithaca.

COMMITTEE TO NEGOTIATE WITH R. R. COMPANIES FOR THE TRANSPORTATION OF STOCK, IMPLEMENTS, PASSENGERS, &c., TO AND FROM THE SHOW.—E. P. Prentice, Albany; Geo. Vail, Troy; T. S. Faxton, Utica; M. D. Burnett, Syracuse; C. P. Wood, Auburn; L. B. Langworthy, Rochester; L. F. Allen, Buffalo.

FOR THE RECEPTION OF STOCK, &c., &c.—Ira Hopkins, Esq., Maj. J. B. Dill, Wm. Howard, Esq.

PENNOCK'S SEED AND GRAIN PLANTER.



PENNOCK'S SEED AND GRAIN PLANTER—FIG. 62.

This machine will plant wheat, rye, Indian corn, oats, peas, beans, rutabagas, and turnips; and can be regulated to drop any required quantity on an acre.

The drills can be thrown in or out of gear separately, so as to plant a field of any shape without seeding any part twice. They are so arranged as to operate equally well on all kinds of land—hilly and rough, as well as level and smooth. A man, with two horses, can put in from 10 to 12 acres with wheat in a day, and, with one horse, he can plant 20 acres with corn per day.

Pennock & Co., Kennett Square, Chester Co., Penn.

MANAGEMENT OF HONEY-BEES.—No. 2.

Patent Hives.—Various forms of hives are now in use denominated "Patent Hives," the inventors of which seem to have aimed at novelty rather than at any real improvement upon hives previously in use. That some of them may, in certain locations, during favorable seasons, seem to answer the purpose for which they are intended, I do not deny; yet there are several essential points which they have lost sight of, and which I think are of vital importance to the attainment of that perfect success, which, in my opinion, is within the reach of every man who may choose to avail himself of it. The question may be asked, what can we reasonably expect from a hive of bees as regards a yearly profit? I answer, that every stock (so called after the first year) should, at least, give an increase of one swarm, and also produce a surplus of from twenty to fifty pounds of honey. When this result is not attained upon an average, from year to year, in a tolerably good location, we may infer that *we*, and not the *bees*, are at fault. In some cases, three and even four swarms have been thrown off by a single stock the same season, and twenty or thirty (and in cases of less swarms), perhaps fifty or sixty pounds of honey stands above a winter supply, but such cases are rare.

It was my intention to describe several styles of "Patent Hives" now in use, and to point out their faults (in my opinion), but as it would require more space than I feel at liberty to

exact, I shall endeavor to cover the ground by showing the essential requisites in the premises upon my principles of management, and as it is a true saying, that "a tree is known by its fruits," I cannot but claim some substantial grounds for my system, while my neighbors, with their costly, complicated hives, find nothing but vexation and loss.

It will be observed that I, in No. 1, fixed the size of hives at twelve inches square in the clear; now, it is the body of the hive, where the *brood comb* is built, that requires our particular attention, and I have no hesitation in saying that it is a fatal error to construct hives less than twelve inches in diameter. Making up the difference in length will not do. The reason is this; bees, by a natural instinct, implanted in them by the great Creator of every living thing, taking possession of a new habitation, see the necessity of building a portion of their work for the express purpose of containing a supply of food when the flowers are faded and gone, and winter's bleak blasts flit around them; and also another portion for the purpose of increase of their species. They commence laying the foundation of these two distinct kinds of comb, in a great measure, in accordance with the superficies of the upper area of the line. For instance, they commence at *first* building *brood comb*, and when they have used such portions of the space as nature teaches them can be used for that purpose with

NEW YORK STATE AGRICULTURAL SHOW.

THE N. Y. State Agricultural Society holds its Sixth Annual Show at Auburn, on the 15th, 16th, and 17th of September next.

This place was selected because of its central position, and also because of its being readily accessible to the farmers resident in the southern tier of counties, who have hitherto been less accommodated by the annual position of the show than almost any other portion of the state. But Auburn being directly on the railroad, and at no great distance from the Cayuga and Seneca lakes, where the great bulk of the business and travel of these counties debouches, it is hoped and believed that their agricultural population will feel themselves bound to co-operate with the more central counties, who are already known to make great efforts to sustain the high character of New York's annual agricultural show. If a judgment may be allowed, based upon the preparations already made, the approaching fair will be the most splendid ever held in this state. Being in the immediate neighborhood of some of the most noted breeders of cattle, sheep, and horses, there can be no doubt but that the display will be admirable. It is confidently predicted that the yokes of working cattle will be unrivalled.

The State Show has hitherto received, as it has deserved, the liberal countenance of the agricultural public. The Society's efforts to render the show attractive and useful are unabated, and it hopes that every friend of agriculture will cordially and zealously do his best to ensure at least its accustomed and annual reward.

The arrangements made by the citizens of Auburn are ample and satisfactory. *There is room, and a hearty welcome for all.*

For the first time a committee of ladies take part in our proceedings. The display of female skill and taste has always given brilliancy and lustre to the State Show, but as the whole matter is now placed exclusively in the hands of ladies, it is hoped that the wives and daughters of farmers will feel the weight and the extent of their responsibilities.

An examination of the annexed list will show that the committees are selected with care, and that they are composed of persons of great practical experience and high moral character.

The Committees on the Premium list were appointed as follows:—

Committee of Arrangements, and for Selecting the Show Ground, and preparing it for the coming Exhibition.—J. M. Sherwood, J. H. Chedell, C. C. Dennis, Auburn; Wm. Fuller, Skaneateles; H. S. Randall, Cortland Village; J. B. Nott, Albany; S. M. Brown, Elbridge; A. Thompson, Aurora.

Committee for Reception of Strangers.—E. T. Throop, Willow Brook; A. Conkling, Melrose, W. H. Seward, Chris. Morgan, E. A. Worden, T. Y. How, Jr., S. A. Godwin, Auburn.

1st CLASS.—*Durham Cattle.*—Gov. Allen Trimble, Ohio; Henry Parsons, Ancaster, Canada West; L. Chandler Ball, Hoosack.

2d, 3d, AND 4th CLASSES.—*Hereford, Devon, and Ayrshire Cattle.*—Elias Phinney, Lexington, Mass.; Lemuel Hulburt, Winchester, Conn.; Edward Cox, Black Rock.

5th CLASS.—*Crosses of Native and Improved Cattle.*—Ira Hitchcock, Vernon; Lewis G. Morris, Morrisiana; John Randall, Norwich.

6th CLASS.—*Native Cattle.*—Wm. Garbutt, Wheatland; Thomas Hilhouse, Albany; Samuel Stevens, Preble, Cortland county.

WORKING OXEN.—Sanford Howard, Albany; Wm. Fuller, Skaneateles; John Ayrault, Perrinton.

STEERS.—Gideon Ramsdell, Perrinton; Francis Hibbard, Cortland Village; Hiram Clift, Marcellus.

FAT CATTLE.—John Holcomb, Wilmington, Delaware; Thomas Kirkpatrick, Albany; A. L. Freeman, Jordan.

FAT SHEEP.—Elias W. Cady, Dryden, Tompkins co.; Wm. Osborn, Auburn; — Hayden, Syracuse.

STALLIONS OF ALL WORK AND DRAUGHT, AND MARES.—Adam Ferguson, Watertown, Canada West; Elbert Jones, Oyster Bay; Henry K. Morrell, Caroline county.

BLOOD STALLIONS AND MARES.—James Bathgate, Fordham; D. D. Campbell, Schenectady; Gen. Daniel Jones, Cold Spring, Queens county.

BEST MATCHED AND SINGLE HORSES.—Edward Long, Cambridge; William A. Dutcher, Penn Yan; Wait S. Davis, King's Ferry.

LONG WOOLLED SHEEP.—Philip Reybold, Wilmington, Del.; Samuel Cheever, Stillwater; Augustus Rayner, Clarence, Erie county.

MIDDLE WOOL.—Wm. Howitt, Guelph, Canada West; Paoli Lathrop, South Hadley Falls; Benjamin Enos, De Ruyter.

MERINO SHEEP AND THEIR GRADES.—Robert R. Reed, Washington, Pa.; Edward A. Le Roy, New York; N. B. Smith, Woodbury, Conn.; Samuel Lawrence, Lowell, Mass.; S. Newton Dexter, Oriskany.

SAXON SHEEP.—Adam Hildebrand, Massillon, Ohio; Daniel Rogers, Hosack Corners; William McKee, Salem, Washington county; John A. Tainter, Hartford, Conn.; Homer Blanchard, Kinderhook.

SWINE.—G. V. Sackett, Seneca Falls; P. N. Rust, Syracuse; E. L. B. Curtiss, Danby, Tompkins co.

POULTRY.—L. B. Langworthy, Rochester; Thomas Hollis, Gilbertsville; Edward Mesier, Fishkill.

PLOWS.—C. C. Dennis, Auburn; Enoch Marks, Fairmount; S. N. Wright, Vernon.

HARROWS, WAGONS, &c.—Samuel Greenleaf, Canandaigua; E. P. Beck, Sheldon, Wyoming county; Israel Boies, Homer.

CORN AND COB CRUSHER.—George Gaddes, Fairmount; Kingsley Sanford, Volney, Oswego county; Cornelius Bergen, Brooklyn.

PLOWING MATCH.—John Johnston, Geneva; John Finch, Astoria; David Matthews, Truxton; Henry Brewer, Enfield; Paris Barber, Homer.

BUTTER.—Z. Barton Stout, Allen's Hill; Andrew Dickson, Cortlandville; Aaron Petrie, Little Falls.

CHEESE.—Hon. Wm. C. Crain, Warren, Herkimer county; Lewis Eaton, Black Rock; Elijah Morse, Eaton.

MAPLE AND CORN-STALK SUGAR.—Otto F. Marshall, Wheeler, Steuben county; Robert Hadfield Sheldon, Wyoming county; William Blossom, Canandaigua.

SILK.—Joel F. Belcher, Richford, Tioga county; Charles Pardoe, Skaneateles; Edw. Morgan, Aurora.

DOMESTIC MANUFACTURES.—Roswell Randall, Cortlandville; Curtis Moses, Marcellus; Moses D. Burnett, Syracuse.

FRUIT.—John A. King, Jamaica, L. I.; W. L. De Witt, Ithaca; R. T. Underhill, New York.

FLOWERS.—Herman Wendell, Albany; Wm. N. Randall, Cortlandville; — Tracey, Syracuse.

MISCELLANEOUS ARTICLES NOT ENUMERATED OR SPECIFIED.—R. L. Allen, Buffalo; J. T. Cooper, Albany; William Jackson, Syracuse.

VEGETABLES.—L. A. Morrell, Lake Ridge; George J. Pumpelly, Owego; Henry Morgan, Aurora.

STOVES AND OTHER MANUFACTURES OF IRON.—C. N. Bement, Albany; Samuel T. Pratt, Buffalo; Franklin Manning, Syracuse.

PAINTINGS AND OTHER DRAWINGS.—Francis Rotch, Butternuts; — Walker, Utica; Gen. John A. Granger, Canandaigua.

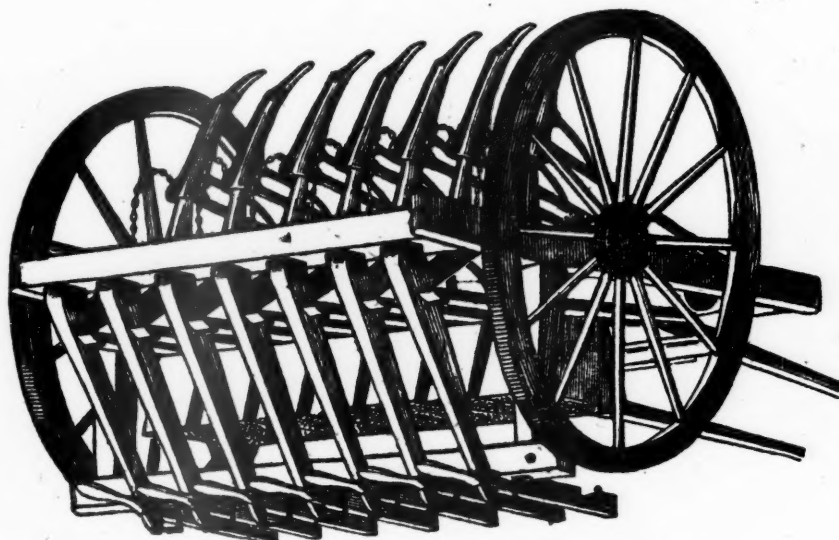
ORNAMENTAL, SHELL, NEEDLE, AND WAX WORK.—Mrs. B. D. Coe, Buffalo; Mrs. Hanson Cox, Auburn; Mrs. Alvah Worden, Canandaigua; Mrs. Wetmore, Utica; Mrs. W. W. Watson, Geneva.

UNENUMERATED IMPLEMENTS, AND OTHER ARTICLES.—J. J. Viele, Troy; J. B. Viele, Troy; J. B. Duane, Schenectady; Stephen B. Cushing, Ithaca.

COMMITTEE TO NEGOTIATE WITH R. R. COMPANIES FOR THE TRANSPORTATION OF STOCK, IMPLEMENTS, PASSENGERS, &c., TO AND FROM THE SHOW.—E. P. Prentice, Albany; Geo. Vail, Troy; T. S. Faxton, Utica; M. D. Burnett, Syracuse; C. P. Wood, Auburn; L. B. Langworthy, Rochester; L. F. Allen, Buffalo.

FOR THE RECEPTION OF STOCK, &c., &c.—Ira Hopkins, Esq., Maj. J. B. Dill, Wm. Howard, Esq.

PENNOCK'S SEED AND GRAIN PLANTER.



PENNOCK'S SEED AND GRAIN PLANTER—FIG. 62.

THIS machine will plant wheat, rye, Indian corn, oats, peas, beans, rutabagas, and turnips; and can be regulated to drop any required quantity on an acre.

The drills can be thrown in or out of gear separately, so as to plant a field of any shape without seeding any part twice. They are so arranged as to operate equally well on all kinds of land—hilly and rough, as well as level and smooth. A man, with two horses, can put in from 10 to 12 acres with wheat in a day, and, with one horse, he can plant 20 acres with corn per day.

Pennock & Co., Kennett Square, Chester Co., Penn.

MANAGEMENT OF HONEY-BEES.—No. 2.

Patent Hives.—Various forms of hives are now in use denominated "Patent Hives," the inventors of which seem to have aimed at novelty rather than at any real improvement upon hives previously in use. That some of them may, in certain locations, during favorable seasons, seem to answer the purpose for which they are intended, I do not deny; yet there are several essential points which they have lost sight of, and which I think are of vital importance to the attainment of that perfect success, which, in my opinion, is within the reach of every man who may choose to avail himself of it. The question may be asked, what can we reasonably expect from a hive of bees as regards a yearly profit? I answer, that every stock (so called after the first year) should, at least, give an increase of one swarm, and also produce a surplus of from twenty to fifty pounds of honey. When this result is not attained upon an average, from year to year, in a tolerably good location, we may infer that *we*, and not the *bees*, are at fault. In some cases, *three* and even *four* swarms have been thrown off by a single stock the same season, and twenty or thirty (and in cases of less swarms), perhaps fifty or sixty pounds of honey stands above a winter supply, but such cases are rare.

It was my intention to describe several styles of "Patent Hives" now in use, and to point out their faults (in my opinion), but as it would require more space than I feel at liberty to

exact, I shall endeavor to cover the ground by showing the essential requisites in the premises upon my principles of management, and as it is a true saying, that "a tree is known by its fruits," I cannot but claim some substantial grounds for my system, while my neighbors, with their costly, complicated hives, find nothing but vexation and loss.

It will be observed that I, in No. 1, fixed the size of hives at twelve inches square in the clear; now, it is the body of the hive, where the *brood comb* is built, that requires our particular attention, and I have no hesitation in saying that it is a fatal error to construct hives *less* than twelve inches in diameter. Making up the difference in *length* will not do. The reason is this; bees, by a natural instinct, implanted in them by the great Creator of every living thing, taking possession of a new habitation, see the necessity of building a portion of their work for the express purpose of containing a supply of food when the flowers are faded and gone, and winter's bleak blasts flit around them; and also another portion for the purpose of increase of their species. They commence laying the foundation of these two distinct kinds of comb, in a great measure, in accordance with the superficies of the upper area of the line. For instance, they commence at *first* building *brood comb*, and when they have used such portions of the space as nature teaches them can be used for that purpose with

safety, they then begin their *store combs*. In order to illustrate the effects of a wrong application of *space* in a hive, we will suppose a swarm to be hived in a box nine inches in diameter, by fifteen inches deep; the result would be, that the space would not admit of as many brood combs as the bees would construct in a hive twelve inches wide; but says one, "the difference is made up in *length*." Not so. After the bees have worked down some six or eight inches, they have then a tendency to build *drone cells*, which nature also teaches them are essential to their prosperity; yet they may exceed their actual requirements in this kind of cell, so much so, as to be the means of the impossibility of their ever doing well, in consequence of there not being a proper proportion of *worker cells* in the hive, causing a sparseness in the only kind of bee that is manifestly of use, at the same time producing a legion of lazy drones that gather no honey, but consume the scanty supply stored by the workers, too weak in numbers to be able to afford a particle of their labors to be lost. This, I contend, is one cause of ill-success, and if any of my readers has hives of such dimensions, or of any dimensions in which the *depth* exceeds the *breadth*, I would advise him to look to it; for, in order to have bees prove as prosperous as it is possible for them to be, they must be able to give all the increase that nature would grant them.

I will now give a view of the *tout ensemble* of my hives, in order to arrive at other no less important points. The material is prepared as for a hive twelve by twenty-one inches in the clear. At a distance of twelve inches from the bottom, a centre or dividing board is placed with six holes about one inch in diameter, through which the bees pass into the boxes above. These holes are so arranged that *three* of them come under the centre of each box. The top board or cover of the hive projects an inch or two over the sides all round. At the back of the hive, a door of the size of the upper space is placed, which may either be hung on hinges, or so secured by two wooden or brass buttons, with a small knob in the centre, as a handle. This part of the hive is secured against rains by having the back fitted in with a groove, and the centre-board extending one-half its width above the division connecting the main part of the hive with the door, and being made on a level at this junction, and the door to correspond, causes the water in the out-door apiaries to run off without the least detriment to the operations of the bees. This upper space is of no importance as regards the general welfare of the bees, and it may be just as large as one pleases, only that I consider a space of eight inches by twelve as large as we should exact the bees to fill, as our chief security lies in seeing that they have an ample supply of honey for winter consumption, and two boxes made very light and thin, fitted to fill the above space, will contain about thirty pounds, which I deem a sufficient tax upon the labors of the bees generally; under some favorable circumstances these boxes may be emptied and replaced for a second filling with safety. These boxes should have an opening at the bottom, and the inner edges, to admit the bees to pass from one box to the other, for where

the box is filled first, the bees remain inactive, without any regard to the partially filled one adjoining. I think that one box is preferable to two as far as regards the facility afforded the bees in storing honey; for more honey can be obtained from them with a single box filling the space, but it is not as convenient for those who vend their honey.

We now come to the bottom of that kind of hive which I am attempting to describe. I said that I made the body part of my hives one foot square, but it is very important that a little inclination should be given to the bottom board from back to front, and to effect this, I make a difference of one inch between the depth of the front and back sides of the hive; say, front twelve and a half inches, back eleven and a half inches. This I think fully sufficient to answer the purpose, being principally to carry off water and afford the bees facility in removing dead bees, &c. The bottom board is made to fit, except it projects two or three inches in front, and it is hung with wires about three-eighths of an inch from the bottom. This kind of hive is a combination of the good qualities of hives now in use, adapted in size to ensure success.

T. B. MINER.

Ravenswood, L. I., July 6, 1846.

CULTIVATION OF CORN.

UNDER the above head, Dr. Philips of Mississippi wrote an article which appeared in our June number, page 183. In it he wished us to make an extract from the Anniversary Oration, delivered before the Burke County Central Agricultural Society of Georgia, by M. C. M. Hammond. Our copy of this oration being mislaid, we could not do so at the time, but having procured another, we now give it to our readers. So far as we are capable of judging, the method recommended by Mr. H. is highly worthy of practice at the south. He says:

"But our common culture I fear has its evils, and with the hot sun, must share the responsibility of failure. Perhaps we usually work our corn too late in the season, and thus cut the roots at the critical periods of tasselling or shooting. We may plant too wide apart, in the stronger lands particularly, and lose the benefit of shading the soil, which checks the growth of grass and protects the roots. We should break the land deep at first, since the roots will not spread so much if they can descend, and will be less apt to be cut, will gather more nutriment when manured in the hill, and suffer less in a dry season, provided the surface has strength to impel them to the clay sub-soil where moisture is perpetual. We should plant early, since it always increases the grain, and is equally important to gather as early as it can be preserved, for here likewise the grain is augmented. In short, by careful experiment and judicious reflection, I have no doubt any ill effects of climate may be overcome, and this invaluable plant grown in its utmost perfection on our soil and under our sun; and that, from corn alone, sold in the grain, or manufactured into sugar, or fed away and sold in meat, every planter will soon make it, as all should do, an invariable rule to pay all his plantation and family expenses."

Ladies' Department.

KNITTING.

EXCEEDINGLY glad am I to find a gentleman like Solus, taking up, and vindicating so agreeably, the too often ridiculed custom of knitting—either for economy or amusement. It is true, stockings may be bought for less than the cost of the yarn, but they cannot be compared to the knitted ones, either for comfort or durability; and as for amusement, who ever saw a group of genuine knitters, rattling their needles, and casting off all kinds of yarn from their nimble fingers, and heard their pitying comments upon those who could not "turn a heel," or "shape a stocking," without acknowledging, at least tacitly, how pleasant it is to have something pretty or useful produced while they chatted so agreeably, or listened to some clever book; besides displaying a fair dimpled hand to advantage—an unacknowledged benefit. Being a knitter myself, I like his picture of evening fireside comfort extremely, and in the name of the sisterhood, tender our thanks, and good wishes, that he may find a "ladye love," who will take pity on his forlorn condition; consent to occupy the promised "easy chair;" listen with intelligent interest to his book (I hope he reads well), and knit scores of comfortable woollen stockings, snowy white, or "darkly, deeply, beautifully blue," as may best suit his fancy, even should he be six feet high, and garter above the knee! And, lastly, that all this may come about before winter sets in, so that he may not pass another New Year's day Solus.

He "hopes the ladies will not think him enthusiastic;" which tells us plainly as any words can, that his tale is true, and he really is a solitary bachelor, who knows nothing at all about woman's ways. Why, I can let him into a secret, and speak positively too—the pretty creatures love enthusiasm, particularly when they are the objects of it, and therefore I hope they *will* think him enthusiastic.

But if Solus be a smoker, a chewer, or a snuffer, I retract every good wish made in his behalf, and transfer them bodily to some honest man who has too much good taste and sense to destroy his own health and the comfort of his family, by such filthy practices. Some nameless bard has said, with more truth than poetry, I confess, that

"Tobacco is an Indian weed,
An evil spirit sowed the seed,
It wastes our money, spoils our clothes,
And makes a dust-hole of the nose."

The German ladies certainly do carry their knitting work to the theatre and other places of public amusement, and by doing so, show to a certain degree the value of time; and I have even heard of their taking it to balls, where one would suppose the feet, and not the hands, were most in requisition; and that it is so, the following anecdote seems to prove, though I cannot vouch for the truth of the whole story. It is said that a young German lady who had no objection to displaying her pretty hands when she sat still, as much as she did her equally pretty feet, when she danced, kept her partner waiting until she knit to "the middle of her needle," then, somewhat in a hurry, put her work

into the bag, and whirled away in a waltz. But, unfortunately, in putting the stocking in, she pulled the ball of worsted out, and as she flew around, the yarn wrapped itself about her, increasing in thickness and length, until, when the dance was over, she was found to be transformed into a huge ball of blue yarn, with four steel needles sticking through it. Those who were present took it as a warning, and never took knitting work to balls again.

I have acknowledged that I am a knitter upon principle, as well as fancy; and innumerable are the mitts, bags, cushions and children's socks that have fallen from my needles; but—I must confess the fact, that never in my life could I bring myself to travel the never-ending rounds of a man's long stocking. I would rather undertake to read Webster's Dictionary regularly through, from A to Z; or count the grains in a sack of flax-seed. It always seemed like the task imposed by Maester Michel Scot, the famous wizard, upon the evil spirit whom he was bound to keep constantly employed—he ordered him to make ropes out of sea-sand, and he is at it yet!

But while Solus so pleasantly contrives to bribe the ladies to engage in this favored branch of home manufacture, can he, or any other sensible man, tell me why the men should never knit for themselves? I *know* it does not *necessarily* make them effeminate; for two of the roughest specimens of mankind I ever saw knit all their own stockings and mittens, while resting at night, and listening to some one reading aloud.

In the country, where the absence of all exciting amusements creates a blank in minds not deeply imbued with a taste for home-bred joys; or, where the education has been finished when the last school bill was paid; the time which is not devoted to labor must hang heavily on the men and boys of a farmer's family, particularly in the long winter evenings, when the cares and the pleasures of the day are over, and the family congregates around the blazing fire, after the evening meal, to while away the time until the hour for retiring. It is not easy to find employment or amusement in which all may participate; with women there is no difficulty—there is always plenty for them to do, in plying their needles, while listening to conversation, or reading—but the unfortunate men and boys—what are they to do? How few quiet occupations are allowed for their hands, while their heads are engaged by the subjects brought before them. Boys are laughed at and called effeminate, if they partake of their sister's work; yet I have known some, as manly and intelligent fellows as ever guided a plow, or delivered an agricultural address, who were not ashamed to employ an hour occasionally, in knitting stockings, weaving fishing nets, and wicker baskets, as a pleasant change from drawing and carrying in wood.

We are accustomed to look down upon men who sew, or knit, and they would be worthy of contempt if they could do nothing else; but until some good reason can be given for preventing them from doing either, rather than see them sit still, and fix habits of idleness, I would encourage them to do any kind of work that could be turned to use or ornament. What sight can be more melancholy

than that of a family of great boys, lounging around the fire, excusing their laziness upon the plea that they "cannot do anything while everybody is talking?"

If any of my country friends think with me upon this subject, I hope they will countenance the expression of such *outré* opinions, by an approving word; and, above all, I pray them to teach their little boys to knit and sew.

Good Mr. Editor, pray, forgive me—I intended to write only a few lines, and I have spun a yarn long enough to knit a pair of stockings for the Irish giant.

E. L.

Eutawah.

Boys' Department.

GOOD TOOLS FOR BOYS AGAIN.

It is plain injustice, I think, that men alone should use good tools. For the reasons that boys are not so strong, are not so patient, not of that skill and knack found among older hands, nor of courage equal to them, boys should share the advantage,—should have access to the same arsenal of money, and equip themselves with equally good arms.

If you wish, my young friends, for your own best good to get the key to unlock this, plead silence to me, I will tell the secret; if you undervalue it when once told, I shall be apt to suspect you are not so very wise. To carry your point as to getting good tools, persuade the man who makes purchases of this sort, that such ones, though more costly, are the best he can buy. Once convinced of this, once led to believe it heartily, to give it the place and rank of a principle, then, whatever his relation to you, he will find means, if he is a man of nerve and judgment, to collect the money, or if he feels too poor at present, will contrive and scheme till his purse swells to the requisite fulness—the sure fruit of persuasion.

Now for the persuading. It must be done, if at all, seasonably and kindly. But how to persuade, how to convince, how to win him over—this is the secret. Deepest and strongest in the natural heart is the principle of self-love—the very mainspring of motion and action—which a skilful hand will touch and sway at pleasure, to which in everything meant to help procure the good tools, no less than in matters of greater weight, you must refer all the while.

Some fine morning, while the dew-pearls shine among the grass, touched with early sunlight, when the mowers with good sharp scythes are in full swing, levelling before them the broad swaths, cut from a smooth sod, when they glide along fast and easy, but when you, just learning to mow, hindered with the old scythe-blade, narrow as a case-knife, hung on an awkward snath, lag behind the hindmost, to hack and mangle the grass as you can best, then is the time to plead for relief. In earnest tone of voice, mention how much you envy their swifter speed, their greater facility to work; you can insinuate, that, with as good a scythe, you could do much more than now, could with equal readiness turn off, for your own share, a larger "stent"—a little bantering and taunting, as if you would, then, drive them to clip faster, and step quicker, for the sake of safety, from your pursuing

steel, might as well season the dish. Heart-whole, with a good conscience, you could promise more work. This being money in their pockets, because it would save the wages paid out to hired men, would at once appeal to their self-interest. "A penny saved," says Poor Richard, "is as good as a penny earned." Assured of the certainty that for a larger outlay of money in tools, there will flow in a larger income of valuable work, will not the judicious farmer resolve at once to adopt the habit of buying good tools, in preference to every other? Those who would not, it is safe to say, are "few, and far between," like the visits of angels, though not otherwise like angels. Self-interest fairly in view, and proved to point in this course, leads the disposition many steps on the way.

To lead still farther, suggest, that good tools save time,—requiring rarely to be mended, solid, well-made, fitted for hard usage. This is proved by the very quality of the tools—proved by the opinion of farmers in general—proved by a small glance of consideration—so that I need not explain more at length. Can any farmer have more time than may be well used? Too much time for improving the natural quality of his soil; too much for getting it into good heart; too much for improving his stock, their form, their growth, and their general thrift; too much for improving himself every way? It cannot be.

The time saved from good tools facilitating work, if it is spent in labor either directly on, or else for, the farm, select what part you will, results the next year in a greater value of crops, or stock, so much greater as often to pay heavy interest for the surplus expended in tools—more than this, sometimes so much greater, as within the year to *pay itself* all completely, so that the after use of the tools, however long they last, however useful they are, is well-nigh net gain; besides, with a liberal allowance of time to improve, the farmer will get a circle of willing, industrious, intelligent, steady, smart boys—the best of all produce. So your success in pleading for good tools, my boys, may be helped on if you remember to state the saving of time. Still further, it may help your plan, if you signify what *credit and regard* would be paid, and paid willingly. We all love praise—love a good reputation. Towards the parent, if you happen to know him, who supplies his boys with good working tools, show that you feel a sincere respect—let it be seen at home that you look on him as ready to benefit and to please, generous, praiseworthy, and kind. To express these feelings, though, in a tone to provoke, to insult, to hurt friendly feelings, which cannot do so well as they would, is both wicked and needless. . . . Readers of mine, help on the reform, one and all, each in his own sphere. Till I see you again, let me wish you good weather, and good-bye.

LERT.

FIVE MAXIMS TO BE OBSERVED THROUGH LIFE.

1. Never regret what is irretrievably lost.
2. Never believe that which seems improbable.
3. Never expose your disappointment to the world.
4. Never complain of being ill-used.
5. Always speak well of your friends, but of your enemies, speak neither good nor evil.

FOREIGN AGRICULTURAL NEWS.

By the arrival of the steamer Cambria, we are in receipt of our foreign journals up to July 4th.

MARKETS.—*Ashes*, Pots were in fair demand; *Pearls* dull of sale. *Cotton* rather looking up from the late slight depression. Stock on hand in Liverpool on the 1st of July, 757,000 bales against 1,038,000 same period last year. *Flour* and *Meal* dull at a decline. *Beef* and *Pork* a slight reduction in price. *Lard* without change. *Cheese*, the finer qualities much wanted. *Naval Stores* steady. *Rice* in good request. *Tobacco* no alteration. *Wool* had fallen 2d. per lb.

Money was plenty without change in the rates of discount.

The Weather was unusually fine, and considered highly favorable for an abundant harvest.

Passage of the Corn Bill.—This is one of the most important acts, as regards the United States, that has ever passed the British Parliament. It admits pork, beef, flour, and grain, nominally free, and will be the means of taking off annually a large surplus of our agricultural products; and what is of more importance, it will have the effect of binding for all time, two great nations closer and closer together in the arms of friendship. America and Great Britain are the same in language, and essentially the same in blood, and we trust now that the Oregon question is settled, nothing will ever arise to disturb the harmony of an intimate and greatly extended intercourse between them.

To Destroy the Wheat Fly.—Take Orpiment (which can be procured at any druggist's), and, with lighted charcoal, burn the orpiment close to the wheat, any time after sunset, and before sunrise, at the time when the plant commences to flower—it should be repeated while the fly is found to exist. One ounce is sufficient for six acres.

Another, and perhaps equally efficacious Remedy.—So soon as the fly is discovered, or so soon as the plant shows a disposition to open its flowerets, carry around the patch of wheat strong lights at night, and the darker the better—the flies will all rush to the fires and destroy themselves.

Both the above have been successfully tried in Canada, and no farmer should run the risk of losing his wheat when it can be saved at so little cost and trouble.—*Quebec Gazette*.

Summer Pruning.—Standard apple, pear, plum, and cherry trees, require particular attention in regard to pruning, for several years after they are planted, otherwise their tops will get into confusion. Pruning, therefore, is essential in the first instance, even if you should find it impossible to regulate them every year after they get large. Having tied in every shoot of your pear and plum trees, and converted each branch into a sort of besom, you must forthwith loosen them; for you will find that much of the foliage is in the way of being blanched, and from such no good will result. Thin out the shoots that have been most shaded, and gradually shorten the other forerights till the spur-leaves at their bases are duly exposed to the light; but take care not to do this all at once. It is now a good time to shorten the shoots of dwarf standards. One-fourth of their length may be cut off. Shoots are useless, or worse than that, if their foliage cannot be well exposed to the light.—*Gard. Chron.*

The Horse-charmer.—Doubtless, our readers must have heard of the extraordinary gift said to be possessed by an Irishman named Sullivan, who exercised a power over horses that no other horse-breaker in the United Kingdom ever obtained, by means of whispering. He is, therefore, better known in the sporting circles by the sobriquet of "the whisperer." It may not be known that the grandson of this extraordinary man (George Church), who practises the art of horse-breaking and training in Sidney, possesses the secret

of charming this noble animal which gained for his grandsire so much celebrity. We have had frequent opportunities lately of witnessing his performances, and can confidently vouch for his skill. He will take a wild unbroken colt from the bush, and in 24 hours make him so docile and obedient, without severe treatment, that the animal, at command, will lie down under him, feigning death, and remain until roused from the apparent stupor in which he has been thrown, by mesmeric passes and slight manipulation (as it appears to us) on the nervous system, by the slight touch of a rattan. The animal will then lick the face of the operator, put his tongue in his mouth, and whisper in his ear at a signal. Church will then lie down on the broad of his back, and place the animal's fore-foot on the pit of his stomach, also his hind-foot in his teeth, without danger of being pressed too hard. When the horse is relieved from the stupor in which he appears to have been thrown, he resists a repetition of the operation as long as he can, until subdued by the irresistible charm of this extraordinary man, he relapses into the mesmeric state, and is then passively obedient to his will.—*Ibid.*

How to Kill Rats.—A good mode of destroying rats and mice is to cut old corks in slices as thin as wafers, and to fry them in the frying-pan after it has been used for frying any meat, but not burnt; place them about where the vermin appear, and all will be destroyed, for they eat them voraciously.—*Ibid.*

Supply of Indian Meal at Cork.—Such is and has been the extensive demand for this article throughout Ireland since the price was fixed at £10 per ton, that there have been issued from the government depôt at the Lee Mills, in this city, one thousand tons per week to the several relief committees who receive supplies; that is, ten thousand pounds worth of Indian meal per week is issued from Cork alone, to make up for the deficiency caused by the failure in last year's potato crop, independently of the amount sold by importers, on private account, which, however, we have no opportunity at present of ascertaining, but which, we are assured, must be very considerable. A cargo of yellow meal, in prime condition, was last week offered to the relief committee at 30s. per quarter, or about £8 per ton, and from the extensive importations that have taken place, and the prospects of an early and abundant harvest, and the reduction in price of other bread stuffs, the price is expected to fall still lower.—*European Times*.

Concentrated Extract of Malt and Hops.—Few modern inventions are likely to prove a greater source of public benefit than this important patented article, which is now being extensively manufactured in London by a company established solely for that purpose. It is a thick, straw-colored, saccharine essence, and has only to be dissolved in hot-water, and fermented, to afford a fine home-brewed ale. All the inconvenience, waste, loss of time, and uncertainty, attending the old method, when using the malt directly, for family brewing, is entirely avoided. By this compact and cleanly process, one or more butts of beer may be got ready for fermentation within half an hour. Those who know the medicinal virtues of malt and hops will, no doubt, avail themselves of this efficient means of obtaining a glass of fresh wort at pleasure; it is well said, that brewers are their own doctors, such is the efficacy of sweet wort to invigorate a declining constitution.—*Ibid.*

Watering.—If you can loosen the surface of the ground and soak it with water in the evening, the garden will be much benefited, but a slight sprinkling is of little service; the reason why gardeners object to watering in hot weather, is that the ground is apt to become baked; but a very little skill might remedy that inconvenience.

Editor's Table.

THE AMERICAN HERD BOOK.—By Lewis F. Allen. Owing to the late hour at which it came to hand, we had no other space left in our last than an advertising column, to notice this highly valuable pioneer work. As the author of it is a relative of ours, we shall leave it to others to speak of it as it more fully deserves. We made a mistake in our last, in stating that it contained the pedigrees of only 130 bulls and 240 cows; whereas, it records 200 of the former, and upwards of 400 of the latter. For various reasons, which we think absurd enough, a considerable number of breeders neglected to forward their pedigrees for publication. Several of them already regret their omission, and promise to furnish them for insertion in a second volume, which we have no doubt will soon be called for. A limited edition of the Herd Book has been issued; those in want of it, therefore, cannot be a moment too soon in applying for copies—a short time hence and it may be too late.

HISTORY OF AMERICAN CATTLE.—With numerous engravings. By Lewis F. Allen. This work is entirely distinct from the Herd Book, and is designed to take the same place in America as Youatt's British Cattle does in England. This is nearly ready for the press, and will soon appear.

A BRIEF COMPEND OF AMERICAN HUSBANDRY.—By Richard L. Allen. This work is designed as a manual for the Farmer and Planter. It is of the same size as the American edition of Stable Economy, and will be published this month. We think, when out, that it will prove the best work on American Agriculture yet issued from the press. But we shall not attempt to praise it in advance. Those who have read the excellent articles contributed by Mr. R. L. Allen, for this journal, can judge whether he is sufficiently qualified for the task that he has imposed upon himself, to write a brief compend of American Husbandry.

TRANSACTIONS OF THE NEW YORK STATE AG. SOCIETY.—We have at length been favored with a copy of this work. It is a goodly volume of 527 octavo pages, and, judging from a cursory perusal, it comes nearer what it should be than any of its predecessors. But first we would ask why does it borrow its frontispiece? Is it done to advertise other papers, or why is it put there? We hold that the Transactions should be *bonâ fide* the transactions of the State Society, and not extracts and revamped matter, set off with show pictures from any preceding publication whatever. There has been enough of this already. The cuts of the Show Ground at Utica are pretty and appropriate, giving an attractive idea of the same. We are happy to say that these are NOT BORROWED. We hope similar ones will grace every volume. Mr. Quincy's address should have first appeared here, and not been previously published in pamphlet form for the benefit of some particular printer. Of the reports, we like those best which are the briefest. We can conceive of those on Swine and Poultry as funny enough to be read on the occasion; but not sufficiently dignified to bind up in a volume to be sent out to Europe and elsewhere, as the Transactions of the New York State Ag. Society. We find no such things in the Transactions of the English or Highland Ag. Societies. What the public expect in such volumes is valuable FRESH matter, in as simple and condensed a form as possible, for the sole benefit of the plain matter-of-fact farmer. Reports of farms we were much interested in, and hope the Society another year will give prizes on the agriculture and improvements of counties. The article on the Wheat Fly, however valuable it may be, should have been rejected, for the simple reason that nearly all of it had previ-

ously appeared in another journal. It is a rule with European Societies to reject all such matters as have been previously published, otherwise they might print ten thousand volumes a year, and call them their "Transactions." The question arises, is this matter *bonâ fide* the transactions of the State, or County Societies? Yes; then print it. No; then reject it. We should be glad to speak of other parts of the volume under review, but have not space to do so now. The Treasurer's Report shows \$2,000 belonging to the Society, invested on bond and mortgage, and a cash balance on hand besides, of \$546.21.

VOYAGES OF DISCOVERY AND RESEARCH WITHIN THE ARCTIC REGIONS.—By Sir John Barrow. With Maps. Pp. 359, 12mo. Price 50 cents. Harper & Brothers, 82 Cliff Street. This is another of those no less beautiful, than highly valuable, pocket volumes, such as we described in our May No., in noticing the "Journey to Ararat," that the Messrs. Harper are issuing from their teeming press. The present volume under notice, may be properly called a continuation of one by the same author, published some time since, giving an account of the discoveries and exploits of the old mariners in the days of the Cabotas. This commences with the voyage of Captain Buchan in 1818, and ends with the discoveries of Mr. Simpson in 1839. It is a delicate task to abridge a number of large octavos to a moderate-sized duodecimo; but in this we think Sir John has eminently succeeded, preserving all that the public generally would care to know of the Arctic Regions. The perilous incidents and adventures of the several voyagers, are, in most instances throughout the narrative, given in the original words of the writers of the journals, which we think altogether better than for the author to have remodelled them in his own style.

EUROPEAN AGRICULTURE.—By Henry Colman. We are in receipt of Part VI. of this publication, and are glad to find the author leaves speculative and extraneous subjects to take care of themselves, throughout the number, and confines himself to practical matters of value. Paring and burning, draining, ditching, and warping, are the principal subjects of this number, all of which Mr. Colman has treated in a brief and clear manner.

THE HORTICULTURIST, and Journal of Rural Art and Rural Taste. Edited by A. J. Downing. Published by Luther Tucker, Albany, N. Y. A monthly publication of 48 pages, octavo. Price \$3 a year. This work is beautifully embellished with numerous wood cuts, and is got up throughout in a style that would do credit to European publications. The editor has been long and favorably known as the author of "Landscape Gardening," the "Fruits and Fruit Trees of America," &c.; and after saying thus much, we need add nothing more to show that he is eminently qualified for the task he has undertaken. The articles in this number are pertinent, varied, and racy. A succession of such will make this journal deservedly popular. A work of this elegant order has long been wanted in the United States. We welcome Mr. Downing among the editorial corps, and wish him all success in his arduous undertaking.

THE NEW ENGLAND FARMER.—We deeply regret to learn, that this old and favorite work was discontinued on the 22d of June last. It had completed its 24th volume, the publication having been commenced in 1822. Its familiar face and instructive pages will be sadly missed by its friends. We trust its proprietors, Messrs. Breck & Co., will ever find other objects on which to bestow their attention, which may contribute to their wealth and happiness. We presume the increase of their mercantile business, leaving them little leisure to attend to editorial duties, was one cause of their discontinuing the Farmer.

REPORT OF THE COMMISSIONER OF PATENTS FOR THE YEAR 1845.—We have received this annual Document, and find it more voluminous than any of its predecessors—containing 1,376 octavo pages. Although forty-eight new patents have been granted the past year, for things relating to agriculture, the Commissioner adds that little of novelty has presented itself in them. The Patent Report, of itself, usually makes but a small pamphlet. Out of the 1,376 pages lying before us, only 89 are found necessary for this purpose. It has been the practice, however, for the past few years, to add a quantity of other matter to it, on the subject of agriculture and the agricultural resources and statistics of the United States. So long as the articles added were ORIGINAL communications to the Commissioner, and *not before published*, and were pertinent to the subject, and not too prolix, this was proper enough; but like too many things in this world, this report has sadly degenerated, and instead of the racy articles which made up the first one of this kind, we have a republication copied from the agricultural journals of the day, of a mass of matter, much of which is the crudest stuff we ever saw put into print—a disgrace to the papers where they originated, and a quadruple disgrace to the Document which has copied them. To point out these matters would require more space than we can devote to them; we therefore forbear, trusting that another year will show a great reform. We like to see agricultural information of a proper kind, furnished by the government to the people, and have no doubt of its being a legitimate object; but it is most unfair to plunder the agricultural journals in this way, and bring Uncle Sam into market as a competitor, with *cabbaged* goods. The expense of this document to the government, is enormous. One of the Senators in Congress, states it to be \$114,000, out of which the printers, Messrs. Heiss & Ritchie, clear a net profit of \$57,000!!! Though legalized by Congress, this is nothing less than a shameful and outrageous plundering of the people of the United States, and ought not to be tolerated any longer by the National Legislature. We perceive that the attention of members of Congress has lately become aroused to the flagrant waste of money in the public printing, and if this document has the effect of assisting to promote a reform, then its issue will at least have had one good effect upon the community. If the farmers would look closer to their servants at Washington, we should have no complaints to make in these matters; but they, good easy souls, seem to think little of what becomes of their hard earnings—the people's treasure—but go on, and sweat away, leaving the favored few to grow rich at their expense, while they themselves contrive to keep as ignorant as possible of their doings. In all future reports, we trust the Commissioner will be allowed to employ first-rate scientific and practical men, to assist in making them up.

CONNECTION OF THE PHYSICAL SCIENCES.—By Mary Somerville. Pp. 433. Price 50 cents. Harper & Brothers. Would that we could persuade that numerous class of ladies who spend so much of their precious time over exciting romances, to take up this work, written by one of the best of their own sex, and study it with the devotion it deserves. How it would ennoble their minds. What beauty, what wisdom, what goodness, it would teach them. It ranks high with European scholars, and we are not without our hopes that it may take the same stand with American.

THE SPORTSMAN'S LIBRARY; or Hints on the Hunter, Hunting, Hounds, Shooting, Game, Sporting, Dogs, Fishing, &c. By John Mills. Pp. 341. Price \$1. Lea & Blanchard. The author of this work has devoted nearly his whole life to the study and practice of the subjects of which he treats. This has enabled

him to write a very original book, and principally from his own practical knowledge. One may consequently take it up with confidence, relying on the justness and soundness of his observations and directions in all sporting matters.

NAPOLEON AND HIS MARSHALS.—By J. T. Headley. In two volumes. Price \$1.25 each. Baker & Scribner, 145 Nassau Street. The object of the author in writing this work, is declared to be, to correct the erroneous impressions that prevail respecting Napoleon, and to group together some of the most striking events of that dramatic period when he was marching his victorious armies over Europe. Being gifted with a fervent imagination, Mr. Headley in doing this, we think, has gone to the other extreme, and given us all the romance of war without its accompanying horrors and crimes. His style is brilliant and poetic; and whatever may be thought of his views of the subjects of his work, and his manner of treating them, the result is, that he has doubtless made a highly popular and readable book. We understand that upwards of 4,000 copies are already sold, and that the work has gone to a fifth edition.

MISS BEECHER'S DOMESTIC RECEIPT BOOK.—Designed as a Supplement to her Treatise on Domestic Economy. Pp. 293. Price 75 cents. Harper & Brothers. Miss Beecher says that she has aimed at the following objects in this work. *First*, to furnish an original collection of receipts which shall embrace a great variety of simple and well-cooked dishes, designed for every-day comfort and enjoyment. *Second*, to include in the collection only such receipts as have been tested by superior housekeepers, and warranted to be the best. *Third*, to express every receipt in language which is short, simple, and perspicuous. *Fourth*, to furnish such directions in regard to small dinner-parties and evening company as will enable any young housekeeper to perform her part, on such occasions, with ease, comfort, success, &c., &c. A fair friend at our elbow, one who at least ought to know, declares that Miss B. has carried out her designs well in this book, and that it is the very best work of the kind for American housewives, within her knowledge. Having little experience in household matters ourselves, we bow with deference to the above opinion, assuring our readers that they may depend upon it as likely to be more correct than anything we can give them.

A COMPLETE SYSTEM OF BOOK-KEEPING.—Simplified and adapted to the use of Farmers. Embracing a Set of Forms of Accounts for all the principal branches of business of the Farm. Compiled, arranged, and prepared, by T. C. Peters. Price \$1. The author of this valuable work is himself a practical farmer, and knows well what is wanted for his brethren of the same occupation. We have seen nothing of the kind equal to this in its arrangement; and a single copy may last a large farmer for years, and enable him to keep his accounts with great ease and accuracy.

IMPORTATION OF CATTLE.—A Short-Horn cow from the herd of Mr. Bates, of Yorkshire, England, arrived here in the packet ship New York, on the 13th ult. She is a light roan color, of fine form, and a great milker. Another cow from the same herd is to follow soon.

A DELIGHTFUL COUNTRY RESIDENCE.—By reference to the advertisement of Messrs. Cook & Smith, it will be seen that the late residence and grounds of Mr. Shaw, at Astoria, are for sale. It is one of the most delightful we know of, enclosed by masses of the most beautiful hornbeam and evergreen hedges which we have seen in America. Indeed, they would do credit to England. The garden is very fine, and abounds with a profusion of the choicest kinds of fruit. The house and outbuildings are pretty and convenient.

REVIEW OF THE MARKET.

PRICES CURRENT IN NEW YORK, JULY 20, 1846.

ASHES, Pots,.....per 100 lbs.	\$3 50	to	\$3 58
Pearls,.....do.	4 06	"	4 12
BALE ROPE,.....lb.	5	"	7
BARK, Quercitron,.....ton,	22 00	"	24 00
BEANS, White,.....bush.	1 12	"	1 25
BEESWAX, Am. Yellow,.....lb.	26	"	30
BOLT ROPE,.....do.	12	"	13
BONES, ground,.....bush.	40	"	55
BRISTLES, American,.....ib.	25	"	65
BUTTER, Table,.....do.	16	"	25
Shipping,.....do.	9	"	13
CANDLES, Mould, Tallow,.....do.	9	"	11
Sperm,.....do.	25	"	38
Stearic,.....do.	20	"	25
CHEESE,.....do.	5	"	10
COAL, Anthracite,.....2000 lbs.	5 00	"	6 00
CORDAGE, American,.....lb.	11	"	12
COTTON,.....do.	6	"	11
COTTON BAGGING, Amer. hemp,....yard,	13	"	14
Kentucky,.....do.	12	"	13
FEATHERS,.....lb.	25	"	34
FLAX, American,.....do.	8	"	9
FLOUR, Northern and Western,.....bbl.	3 87	"	4 12
Fancy,.....do.	4 50	"	5 00
Southern,.....do.	3 50	"	4 12
Richmond City Mills,.....do.	5 75	"	6 00
Rye,.....do.	2 50	"	2 75
GRAIN—Wheat, Western,.....bush.	90	"	1 00
Southern,.....do.	80	"	90
Rye,.....do.	68	"	70
Corn, Northern,.....do.	55	"	60
Southern,.....do.	50	"	53
Barley,.....do.	58	"	60
Oats, Northern,.....do.	34	"	35
Southern,.....do.	26	"	28
GUANO,.....do.	2 00	"	3 00
HAY, in bales,.....100 lbs.	45	"	55
HEMP, Russia, clean,.....ton.	215 00	"	225 00
American, water-rotted,.....do.	105 00	"	185 00
American, dew-rotted,.....do.	75 00	"	125 00
HIDES, Dry Southern,.....do.	7	"	8
HOPS,.....lb.	18	"	25
HORNS,.....100.	1 00	"	7 00
LEAD, pig,.....do.	4 00	"	4 12
Sheet and bar,.....lb.	4	"	5
MEAL, Corn,.....bbl.	2 62	"	3 00
Corn,.....hhd.	15 00	"	16 50
MOLASSES, New Orleans,.....gal.	28	"	31
MUSTARD, American,.....lb.	16	"	31
NAVAL STORES—Tar,.....bbl.	1 62	"	1 87
Pitch,.....do.	1 00	"	1 06
Rosin,.....do.	50	"	60
Turpentine,.....do.	3 50	"	4 00
Spirits Turpentine, Southern,....gal.	28	"	31
OIL, Linseed, American,.....do.	60	"	62
Castor,.....do.	60	"	73
Lard,.....do.	60	"	65
OIL CAKE,.....100 lbs.	1 25	"	1 50
PEAS, Field,.....bush.	1 25	"	1 59
PLASTER OF PARIS,.....ton.	2 38	"	3 00
Ground, in bbls.,.....of 300 lbs.	1 12	"	1 25
PROVISIONS—Beef, Mess,.....bbl.	6 50	"	9 00
Prime,.....do.	4 50	"	5 50
Smoked,.....lb.	6	"	9
Rounds, in pickle,.....do.	4	"	6
Pork, Mess,.....bbl.	9 50	"	12 00
Prime,.....do.	7 88	"	9 00
Lard,.....lb.	5	"	7
Bacon sides, Smoked,.....do.	3	"	4
In pickle,.....do.	3	"	4
Hams, Smoked,.....do.	6	"	10
Pickled,.....do.	4	"	7
Shoulders, Smoked,.....do.	5	"	6
Pickled,.....do.	4	"	5
RICE,.....100 lbs.	2 88	"	3 75
SALT,.....sack.	1 35	"	1 45
Common,.....bush.	20	"	35
SEEDS—Clover,.....lb.	6	"	9
Timothy,.....7 bush.	10 00	"	16 00
Flax, clean,.....do.	10 00	"	11 00
rough,.....do.	9 00	"	10 00
SODA, Ash, cont'g 80 per cent. soda,....lb.	3	"	3
Sulphate Soda, ground,.....do.	1	"	—
SUGAR, New Orleans,.....do.	5	"	7
SUMAC, American,.....ton,	35 00	"	37 50
TALLOW,.....lb.	6	"	7
TOBACCO,.....do.	2	"	2
WHISKEY, American,.....gal.	19	"	21
WOOLS, Saxony,.....lb.	35	"	54
Merino,.....do.	25	"	30
Half blood,.....do.	20	"	25
Common do,.....do.	18	"	20

REMARKS.—Ashes steady. Cotton in fair demand for export. Flour firm. Meal dull. Grain selling freely. Molasses considerable inquiry. Tar and Rosin scarce. Provisions unsettled and dull. Sugar has slightly declined. Tallow little in market. Tobacco dull. Wool the same.

Money is abundant for all business purposes. Stocks have undergone a slight improvement.

The Weather has been most extraordinary: cold rains succeeded by an excessively hot sun, giving us greater extremes of heat, cold, and wet, than we have any recollection of ever before experiencing. The crops have consequently suffered somewhat; but, on the whole, are tolerably well secured, and promise thus far much more than an average.

ACKNOWLEDGMENTS.—The Premium List of the New Haven, Conn., Cattle Show, Agricultural and Horticultural Fair, to be held on the 1st of October, at Birmingham, Derby, Ct.; Same of the New Haven Horticultural Show, which takes place at New Haven, Ct., on the 22d of September, continuing three days; Same of the Fairfield Co. Ag. Society Show, which takes place at Bridgeport, Ct., Oct. 14 and 15. The Charter, Constitution, and By-laws, of the Cincinnati Horticultural Society, with a Report of its Transactions for 1843, '4, and '5; Abstract from the returns of Agricultural Societies in Mass.; and Annual Report of the American Institute for 1845; Introductory Lecture delivered at the opening of the first Academical year of the Orange Co. Scientific and Practical Agricultural Institute, May 20, 1846, by A. J. Darrach; Report of the Exhibition of the Buffalo Horticultural Society.

TO CORRESPONDENTS.—M. W. Phillips, T. C. Peters, An Old Pennsylvanian Farmer, C. N. Bement, James S. Peacock, Geo. Vail, A. R. D., Wm. J. Jones, and H. C. Smith.

AGENTS FOR THE AMERICAN AGRICULTURIST.

New Haven, Ct.....	F. Trowbridge.
Newark, N. J.....	B. Myers.
Philadelphia.....	J. M. Campbell and David Landreth.
Washington, Pa.....	Dr. R. R. Reed.
Albany, N. Y.....	E. H. Pease.
Syracuse, N. Y.....	Stoddard & Babcock and L. W. Hall.
Auburn, N. Y.....	Alden & Markham.
Rochester, N. Y.....	C. F. Crossman.
Buffalo, N. Y.....	J. H. Butler & Co.
Boston, Mass.....	Saxton & Kelt.
Milwaukee, Wis. Ter.....	Hale & Hopkins.
Chicago, Ill.....	S. F. Gale & Co.
Columbus, Ga., and Montgomery, Ala.....	Hall & Moses.
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New Orleans.....	D. Baker & Co. and N. Steele.
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Athens, Geo.....	J. J. Richards.
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FIELD AND GARDEN SEEDS.

The Subscriber has been so often requested to add Garden Seeds to his assortment of Field Seeds, that he has at length consented to do so, and now offers for sale a great variety, grown by responsible persons, and put up expressly for him. They are fresh, and he confidently thinks may be relied upon.

A. B. ALLEN, 187 Water Street, N. Y.

GUANO.

The Subscribers offer for sale, on very accommodating terms, the balance of the ship Shakspeare's cargo, the only direct importation into this port from Ichaboe. Much guano from other parts of Africa has been sold as Ichaboe, which on trial has produced unfavorable results. To prevent the loss of ammonia, this cargo has been put in air-tight casks. Apply to
Feb. 6, 1846. E. K. COLLINS & CO., 56 South St.

POUDRETTE FOR SALE.

The Lodi Manufacturing Company offer Poudrette for sale at the following prices. At the Factory on the Hackensack River, 4 miles from New York in bulk, 35 cents per bushel, and \$1.63 cts. per barrel. Delivered in New York from 1 to 6 bbls., \$2.00 per bbl.; 7 bbls. and over, \$1.75 per bbl. Apply to the office of the Company, 51 Liberty Street, or to A. B. Allen, 187 Water Street, where printed directions and other information may be obtained.

PRINCE'S LINNÆAN BOTANIC GARDEN,

Flushing, Long Island, N. Y.

List of Plants, Flowers, &c., exhibited at the First Semi-Annual Exhibition of the Long Island Horticultural Society, at Flushing, on the 11th and 12th of June, 1846, from the Linnæan Botanic Gardens and Nurseries of Wm. R. PRINCE & Co. The most of the Roses were exhibited in frames for display, without being offered for premiums.

ROSES.

ROSES—BENGAL.—Cypres, Cels Multiflora, Darius, Jacksonia, Louis Philippe, Madame Fries Morel, Philippe, La Superbe, Furtado, Perfection.

ROSES—TEA SCENTED.—Arch Dutchess Therese Isabelle, Bougere, Dremont, Josephine Malton, Moiré, Nitida, Safrano, Silene, American White, Fleur de Cypres, La Desiré, Barbot, Common Blush.

ROSES—BOURBON.—Abbé Plantier, Amenaide, Acidalie, Augustine Lelieur, Bosanquet, Bouquet de Flore, Gloire de Rosamanes, Henri Plantier, Julie de Loynes, Madame Breon, Thiaffait, Madame Després, Madame Newman, Paul Joseph, Reine du Congress, Comice de Seine and Marne, Madame Margat, Newman, Marginate.

ROSES—NOISETTE.—Lamarque, Miss Glegg, Madame Guerin, Nykemene.

ROSES—PERPETUAL.—Antinous, Du Roi panaché, Darius, Ebène, La Reine, Globe, Marie Denise, Palmyre, Ponctué.

ROSES—HYB. PERPETUAL.—Clementine Duval, Aubernon, Comte de Paris, Madame Laffay, Prince Albert, Queen Victoria, River's (Laffay), Gloire de Guerin, James Watt, Lady Fordwick, Augustine Mouchelet, La Bouquetiere, Isaure La Blaise, Emma Dampierre, Mrs. Elliott, L. Peel, Minerva, Duc d'Enghien, Lady Seymour, Aricie, Requier, Dutchess de Montmorency, Du Roi, long peduncle, St. Fiacre, Strié, Helene Maret, Torrida, Leop. de Bonf, Comtesse Duchatel, Docteur Marx, Dutchess de Nemours, Dutchess de Sutherland, Julie Dupont, Lady Alice Peel, Lane, Marquis de Bocella.

ROSES—HYB. CHINESE.—La Nubienne, Madame Plantier, Ne Plus Ultra, Pallagi panaché, Sextus Pompinius, Triomphe d'Angers, Vandaels, Velour Episcopal, Violet de Belgique, Watt's Celestial, Belle Feronnière, Poilpré, Sanspareil, Parigot, Duke of Sussex, Anzou, Assuerus, Brenus, Chatelaine, Comte Coutard, De Chenedolé, De Laage, Duke of Devonshire, Fabvier, Flora McIvor, George the IV., La Grandeur, Louis Le Roi, Beranger, Vibert, Bouillote, Limulienne, Fimbriata.

ROSES—HYB. BOURBON.—Celine, Coupe d'Hebe, Elize Mercœur, Henri Barbet, Hortense Le Roy, La Dauphine, Le Gouvê, Majestueux, A Petales Mucroné, Strié, Belle de St. Cyr, Paul Ferras.

ROSES—FAIRY.—Roseate.

ROSES—MULTIFLORA.—Laure Davoust, Russelliana or Cottage.

ROSES—HYB. CLIMBING.—Plantier, Triomphe de Bollwyller.

ROSES—AYRSHIRE.—Ayrshire Queen.

ROSES—MOSS.—Common Red, Crested, Crimson, Incarnate, Louise Colet, Luxembourg, Crimson, Pomponne feu, Princess Royal, Sage Leaved, Scarlet De la Fleche, White Bath, White French, White Perpetual, D'Orleans, Afeuille luisante, Angeliue Quetier, Charlotte de Sor, Laucel, Celina, Panaché double, Rouge, Rosefoncé, Eclatante, Mrs. Wood, Pompon feu, Unique de Provence, Malvina, French Crimson, A gros fruit, Feuilles Agathe, Charles, Pale Violet, Vilmorin, Variegated.

ROSES—ALBA.—Felicité Parmentier, New Blush Hip, Old White, Sophie de Bavière, Pomponne Carnée.

ROSES—PROVENCE.—Odette de Champdivers, Snow Ball, Royal Cabbage, Blush, Frelatte, Unique.

ROSES—DWARF PROV.—Rose de Juno.

ROSES—VARIEGATED PROV.—L'Hopital, Cosimo Ridolphi, Comte de Murinais, Tibulle, Agamede, Belle Esquermoise, Belle Hermine No. 6, Belle Hermine No. 7, Insigne Destekla, Pluton, Imperiale, Berlièze, Marjolain pourpre, Sœur Vincent.

ROSES—HYBRID PROVENCE.—Belle Sylvain, Blanche Fleur, Christine de Pisan, Donna Sol, Feu brillant, Lee, Zetelle, Madame Huet, Glory of France.

ROSES—GALLICA.—Leon the 10th, Arlequin, Fanny Parisot, Fontenelle, La Muskowa, New Village Maid, Panaché semi-double, Stella, Tricolor No. 1, Tricolor No. 2, Village Maid, The Prince, La Belle Marié, Antonine d'Ormois, Vidua, Aurelie La Marc, Boula de Nanteuil, Crivalla, Roi de Prusse, Dutchess of Buccleugh, Heureuse Surprise, William Tell, Mignon bicolor.

ROSES—DAMASK.—Monstreux.

ROSES—CENTIFOLIA.—Al. Blanchard, Oielet.

ROSES—BLACK.—Adelaide, Black Merice, Champion, Cramoie enflammé, Gloriosa Superba, Imperiale, Iris Noir, La Belle Africaine, La Cherie, La Negresse, Le Seigneur d'Artzelaine, Negro, Negro panaché, Pluto, Proserpine, Rebecca, Regina Nigro-rum, Tuscan, Venustus.

ROSES—SUMMER.—Belle Elize, Bright Crimson, Dark Marbled, Diadème Superbe, Garnier Pages, Grand Alexandre, Grand Duc, Grand Monstreux, Jacqueline panaché, L' Aimable d'Stors, Ornement de parade, Paragon, Petite Blush, Purple Velvet, Striking Red, Transparent, Victoire Bizarre, Volidatum, Agremont.

ROSES—SWEET BRIARS.—Double Margined Hip, Riego, White American.

ROSES—AUST. YELLOW.—Harrison's double yellow.

FLOWERING PLANTS AND SHRUBS.—Kalmia Latifolia alba, Magnolia Macrophylla, Magnolia Gracilis, Deutzia Scabra, Cypripedium Spectabile, Spiraea filipendula pleno, Geranium pratense pleno, Campanula persicifolia alba pleno, Campanula persicifolia cerulea maxima, Lychnis dioica pleno alba, Hotteya Japonica, Bigonia Crucigera, New Honey Suckle from Oregon, Iris of fifteen varieties.

PEONIES.—Humei, Whitleyi, Fragrans pleno, Reevesi, Speciosa bicolor, Violacea, Albiflora fragrans pleno.

GREEN-HOUSE PLANTS.—Aloe albaspinna, Thunbergia Elata, Hydrangea Japonica, Pittosporum revolutum, Gardenia florida, Gloxinia Caulescens.

FUCHSIAS.—Paragon, Maria, Venus Victrix, Kentish Hero, Marginate, Victory Superb.

STRAWBERRIES.—Garnestone Scarlet, Large Flat Hautbois, Prince Albert, Prince's New Pine, Black Roseberry, Downton, Prince's Prince Albert Seedling, Crimson Cone, British Queen, Hovey's Seedling, Boston Pine, Royal Scarlet, Prince's New Early Seedling, Victoria, Aberdeen or Dundee, Princess Alice Maude, Ross Phoenix, Myatt's Eliza, Deptford Pine, English White Wood, Prolific Hautbois, Hudson's Bay, Bishop's Orange, Royal Scarlet, Methven Scarlet, Georgian Scarlet.

RHUBARB.—Leviathan, Victoria, Dalley's New Scarlet Giant, Early Tobolsk, Giant or Goliath, Wilmot's Early Red.

Roses exhibited by William R. Prince & Co., June 25th, 1846.

CHINA.—Archduke Charles, Tancrede, Abelard, Miranda, Darius, Mioland, Reine des Belges, La Superbe, Le Camoens, Jeune Arcole, Caroline de Berri, Hermine, Joseph Deschiens, Roi de Hollande, Menes, Vilmorin.

TEA.—White, Le Pactole, Floralie, Therese Isabelle, Moiré, Madame Roussel, Comte de Paris, Abricoté, Mirabile, Desiré Roussel, Arrance de Navarro, Belle Margueritte, Belle Favorite, Perfection, Marechal Bugeaud.

BOURBON.—Princesse de Modena, Hennequin, Amenaide, Antinous, Anne Beluze, Gaston de Panck, Newman, Abbé Plantier, Don Alvar, Dumont de Conrset, Paul Joseph, Farquin, Souvenir de Malmaison, Jobs Desgaches, Madame Souchet, Julie de Loynes, La Gracieuse, Belle Interessante, Striped, Bizarine, Zulema, Madame Aude, Splendens, Crimson Globe.

NOISETTE.—Vitellina, Aimé Vibert, Clara Wendell, Monstreuse, Victoire Daumy, Nykemene, Nemesia, Solitaire, Prince's Superb White, Boulogne.

PERPETUAL.—Grand Monarque, Requier, Ferox de Guerin, Mogador, Billiard, Amanda Patenotte, White Damask, Du Roi blanche, D'Esquermes, Isaure Labée, Tougard, Moheleda, Pourpre, Minerva, Josephine Antoinette.

HYBRID PERPETUAL.—Louis Bonaparte, Duc d'Aumale, Julie Dupont, Madame Laffay, Princesse Helene, Clementine Duval, Dutchess of Sutherland, Prince Albert, Beck, La Reine, Melanie Cornu, David de Angers, Augustine Mouchelet, Marquiso Bocella, Dutchess de Montmorency.

HYBRID CHINESE.—Beranger, Duke of Devonshire, Vandaels, Vibert.

HYBRID BOURBON.—Joasine, Victor Hugo, Hortense Leroy.

HYBRID CLIMBING.—Triumph of Bolwyller.

HYBRID PROVENCE.—Belle Sylvain.

PROVENCE.—Unique White.

VARIEGATED PROVENCE.—Superb Striped Unique, Mecène, Rouget de Lille, Cosimo Ridolphi.

DWARF PROVENCE.—Pomponne de la Queue.

MACARTNEY.—Double White, Pink Maria Leonida.

FAIRY.—Liliputienne, Roseate.

BOURSALT.—Amadis, Gracilis.

MULTIFLORA.—Double White.

MOSS.—Celina, Blush, Sage leaved, White French, White Perpetual, Louise Colet, Feuille Agathe, Etna, Asepeta, Hardy, Splendens, Orleans, Variegated.

MICROPHYLLA.—Rosea.

VARIEGATED GALLICA.—Village Maid.

PRAIRIE.—Caradori Allan, Anna Maria, Eva Corinne, Seraphine, Baltimore Belle, Queen of the Prairies, Mrs. Hovey, Fatima, Ranunculiflora, Linnæan Hill Beauty, Triumphant, Pride of Washington, Prince's Gracilis, New Seedling Blush.

ALBA.—Felicité Parmentier, New Blush Hip.

GALLICA.—Boula de Nanteuil.

HYBRID.—Manetti, Helene Maret.

DAMASK.—Madame Hardy.

FLOWERS.—Iris of various species, Large Blue Clematis, Cypripediums, &c.

STRAWBERRIES.—Montevideo Pine, monstrous size.

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